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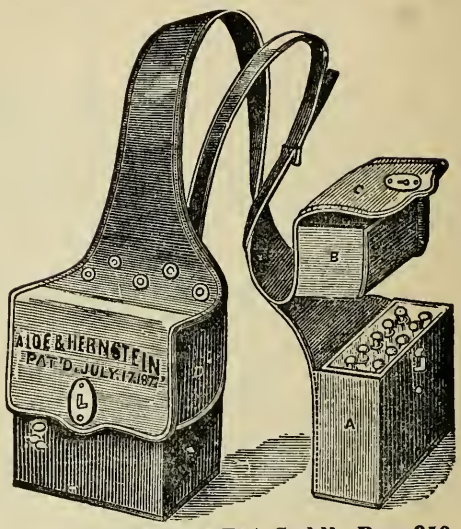

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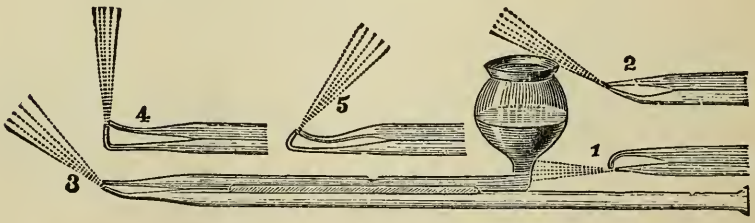

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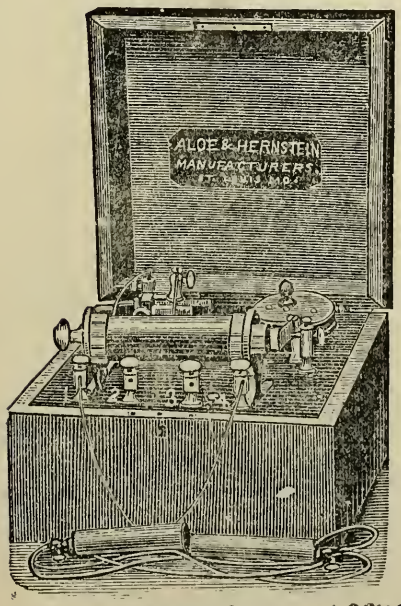

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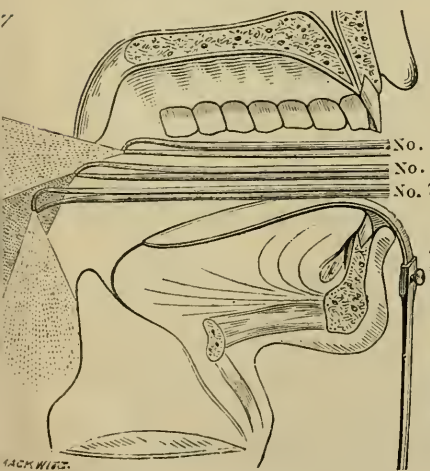

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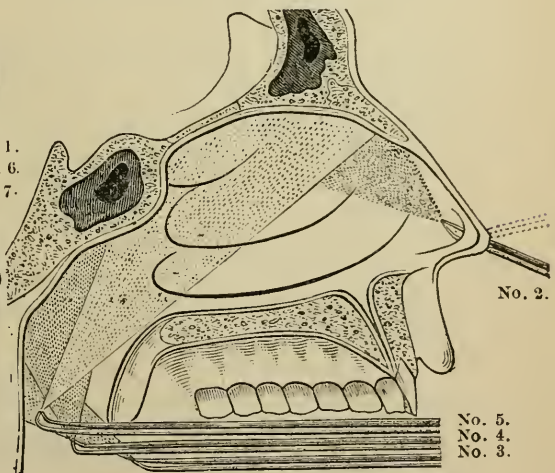

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Original Contributions.

Article LII.

Treatment of Opium Poisoning.* By Darwin H. Bliss, M. D., of Kansas City Mo.

I have only a brief paper to furnish to-day, and in it will confine myself as closely as possible to cases occurring under my personal observation, and I have chosen to consider the Treatment of Opium Poisoning with three consecutive cases in as many months.

Opium smoking or the opium habit will not be herein considered, as they present an extensive field in themselves individually, and the busy practitioner is seldom called to such cases in emergencies. I hope to present to you some interesting points in the treatment of poisoning by opium or morphine, whether accidental or with suicidal intent.

These cases above mentioned, occurred in infancy and childhood.

Symptoms are familiar to all of you and will not need to be gone over unnecessarily by me, in offering the principal points governing the cases to be considered.

Case I. On the 26th, of October, 1.30 A. M., I was hastily called to a case of opium poisoning; the patient, a child aged two years, had been given by mistake, two and one-half grains of morphine, the night previous at 8.30 P. M. The parents had called a physician as soon as they discovered their mistake, (by the difficult breathing of the child) which was about twenty minutes after the morphine had been given; and he, upon his arrival gave ten grains of sulphate of zinc, and soon left the house; giving no further directions, assuring the parents that if they could keep the child awake until two o'clock in the morning, it would recover. But the emetic given did not act, and after laboring with the little one for three or four hours without any improve-

* Read before the Jackson County Medical Society, Feb. 3d, 1882.

ment, they thought best to send for another physician; but physician number two did not feel anxious to take a case of this kind and referred the messenger to me, saying I had the necessary outfit, stomach pump etc., and would, he presumed, take the case.

When I was called at 1.30 A. M., being five and one-half hours after the ingestion of the poison, the case presented an extremely unfavorable prognosis, as the entire amount must by this time have been absorbed. Under these circumstances, I thought best not to use the stomach pump, nor repeat the emetic, as they would only further tend to depression of vitality, and this had already been put to trial by the severe treatment the friends and family had subjected the little one to, by forcibly dragging him about the house for several hours. Coma was so profound that cold water forcibly thrown into the face and on the back of the neck, produced little or no effect; and I directed the use of hot water applications at a temperature of 120° Fahrenheit, and directed the assistant to place the child in her lap and use friction and warm applications alternating occasionally with cold ones. The hot water applications had a much more salutary effect in producing reflex action than the cold.

Immediately upon learning the amount of poison taken, I gave $\frac{1}{30}$ grain atropia sulphate hypodermically. In one-half hour this dose was repeated by the mouth, although it was very difficult to get any substance into the stomach, as the powers of deglutition was very much impaired, and it was only by severe kneading of the external surface of the throat that it could be accomplished. In two hours from the time the second dose was given, I gave the third dose of $\frac{1}{30}$ grain atropia, hypodermically, and did not repeat this till four hours after the third dose was given, viz. at 8 o'clock on the morning after the drug was taken. In the meantime, from the very beginning, I found the most salutary effect in producing reflex action by giving from two to three drops of spirits of ammonia in one-half teaspoonful of brandy and water every half hour; this caused the patient to take deeper inspirations each time it was given.

The pupils were contracted to the calibre of a pin's head, and gave no response to light whatever. The abdomen had become enormously distended with gas crowding the organs of the thorax upward until it seemed as if the abdominal muscles must give way; and I was on the point of using the hypodermic needle to puncture with and permit the escape of gas in this way, but con-

cluded to give rectal injections of assafœtida a thorough trial first; and if this disagreeable remedy failed, I would resort to puncturing; but it did not fail entirely, for after several hours of its use, repeated frequently, at 8 o'clock A. M., the hour the fourth dose of atropia had been given, the eruption of gas from the bowels commenced, and the neighbors who up to this time had been doing all in their power to assist, suddenly became scarce, and claimed they had left some duty at home undone.

The peristaltic motion of the intestines had, previous to this been arrested by the large quantity of opium taken. Respirations at the beginning of treatment were reduced to six per minute and continued so. The pulse was not perceptible at the wrist. I was obliged to keep up artificial respiration the greater part of the time, fearing it would fail entirely, but placed most confidence in the virtue of atropia to counteract or neutralize the opium through the circulation, yet feared to give it in any larger doses, apprehending that in overdoses it would be more serious if possible than the present condition.

I continued the use of these means till 4 o'clock P. M. on the 27th, being twenty hours from the time the morphine was given, when I noticed the first sign of resuscitation and improvement. The little fellow partially opened his eyes and made an effort to cry, immediately closing them and becoming unconscious again. From this time on, I stopped the friction and warming process, and placed him on the bed. Reaction had at last set in and he would rouse up for a few seconds and again become unconscious; each time the intervals becoming shorter and the periods of consciousness more prolonged. No more medicine was given after this, but milk in teaspoonful doses every fifteen or twenty minutes, or as often as the patient wakened constituted all the nutriment necessary to properly support the system. At 8 o'clock P. M., four hours later, the temperature had increased and marked 101° F., and the skin had a dry though not very harsh feeling. This was only transitory, disappearing shortly.

The child rapidly improved from this time on, though I was very apprehensive some serious complication would be the result of the lungs having been so ingorged for this length of time, but happily nothing occurred to retard the speedy and perfect recovery except the soreness due to the use of severe manipulation and friction of the skin, and removal of portions of the epidermis.

Statistics show opiates to be much more fatal in children and

infants than other remedies in the same ratio. A babe one day old has died from the effects of one drop of laudanum, but in the adult one and one-fourth grains morphine has been given hypodermically, without causing death. On the other hand, Dr. Ludwig Franzler reports a case of almost fatal poisoning, in a man, from two drops of a one per cent. solution of atropine dropped in the eye.

In reviewing some of the most important factors in the case, it seems that more perseverance and patience in the medical attendant first called, would have prevented nearly all the severe symptoms that occurred, as he saw the child during the first hour, before the stomach could have become completely obtunded by the morphine; but one dose of sulphate of zinc was not sufficient. Had he given heaping teaspoonful doses of mustard flour in water repeated every fifteen minutes for three doses, if necessary, and then followed by large doses of sulphate of zinc, he would have completely emptied the stomach, and symptoms of collapse have been prevented. Perseverance on my part, after the elapse of five hours, would not have met with success had it not been for the use of atropia in liberal doses and the use of ammonia, which in my estimation is even more valuable in producing reflex action (if judiciously used) than atropia, but is not in any other way, to any extent, antidotal in opium poisoning. It is, so far as I have learned, original with me, never having heard of its being used in these cases. It more than met my expectations and left no lesions due to its irritating qualities.

Atropia in doses of $\frac{1}{120}$ grain in adults will have a decided influence on the capillaries, but in this case a child of two years, no visible reaction took place till after the fourth dose of $\frac{1}{30}$ grain, showing the antagonism exerted by the remaining forces of the opium.

Case II. I was called at 1.15 A. M. This patient was a girl eight years of age; had been under the care of a homœopathic physician for treatment of intermittent fever. I found notable depression, contraction of pupils, stertorous breathing, very feeble pulse and difficulty in swallowing. There was no certainty in this case as to the amount or exact nature of poison taken. A positive diagnosis from the poisoning alone is often impossible. In some cases of congestion of the brain or of uræmia, the phenomena are identical with those of opium poisoning. The homœopath was called to explain himself in the case, but at first

denied having given opiates, though upon further developments acknowledged he had mixed morphine in the powders left for the child; he said he gave it to produce a good night's rest. I got possession of one of the powders and made an analysis of a part of it a few days later, and found it to contain morphia sulphate and cypripedin, the active principle of lady-slipper.

The symptoms were not so severe as in case No. 1 and the distention from the formation of gas was not very marked. The same plan of treatment was adopted in this case, but it only required two doses of atropia, with the use of ammonia to produce the necessary reaction. In about twelve hours the dangerous symptoms had passed away and a prompt recovery resulted.

Electricity was used in both of these cases, but it did not produce any deeper respirations nor stimulate the action of circulation; only producing the spasmodic twitching of the muscles common to action of the current in the recently dead subject and was suspended.

In Case III. one third of a grain of morphine was given by the nurse. The amount was left for the mother to control the pain in rheumatism from which she was suffering at the time. This occured in an infant only six weeks old, and but little could be done that would be of service; although I kept up artificial respiration for six hours and think even this case would have recovered had the constitution at this tender age been vigorous enough to promote the complete absorption of antidotal remedies; but as I thought it not best to be as heroic in the use of the antidote named, in *this case* only the more mild means were used. It requires even more resolution not to overdo the treatment in these cases than to act at all. The anxious parents or friends will constantly urge and entreat you to do more than you are doing, and it is not easy to convince them of the danger of crowding the treatment beyond good judgment in such cases. As stated above, in poisoning by opium, the secretions are diminished and to a great extent suspended. Notably the salivary, pulmonary, hepatic and urinary organs. The vessels of the brain become engorged, the lungs congested, the blood poisoned by the retention of urea, which aids in deepening and making more marked the comatose condition resulting fron narcotic poison. Urea, one of the most important organic constituents of the urine, not being properly eliminated through the excretory functions of the kidneys,

these having been arrested by the action of opium, are no longer adequate to the proper elimination of this excrementitious substance; toxæmia is the result. It is a known fact that the physiological action of atropia affects in a decided manner both the afferent and efferent nerves. The *afferent* or sensory nerves transmit to the nerve centers impressions made upon the peripheral extremities of the nerves. In this way, the mind becomes, through the medium of the brain, concious of external objects. The *efferent* or motor nerves transmit impressions from the nerve centers to the parts to which the nerves are distributed, and these impressions influence the process of secretion, and in establishing *this*, much is done to overcome the condition due to the arrest of secretion.

I claim for ammonia a most valuable factor in the treatment of the severest cases of opium poisoning; not that it is curative in itself, but it is of great service in keeping up reflex action until the crisis is past, and the action of more important antidotal remedies have had sufficient time to act. As in Case I, it required the fourth injection of atropia to produce its physiological action, and by bringing the cutaneous circulation into action lessen the fullness of the vessels of the brain, preventing serous effusion into the ventricles, (of the brain) relieving congestion of the lungs and setting the whole mechanism into healthy normal action again as rapidly as is common in cases of less severe poisoning where the depression has been only moderate.

Article LIII.

Intussusception.

By A. Wislizenus, M. D. of St. Louis.

Last year I communicated in a number of the Journal an interesting and instructive case of intussusception in a child of eight months, with post-mortem examination. The comparative rarity of this disease and the diffiulty encountered often in its diagnosis and treatment induce me to put on record now another case of that disease in an adult person. Although, in the pres ent case, I fortunately had no occasion of verifying my diagnosis by a post-mortem, I feel, nevertheless, confident that all the complex local and general symptoms pointed clearly to such a cause and the successful treatment based on that view goes to corroborate it.

The patient—Mr. L.—46 years of age, of strong constitution, has for many years led a most active life in superintending a very extensive business. As his family physician, I have occasionally prescribed for him in slight indispositions but never in any serious disease. In December 1881, he made by railroad, a business trip through Illinois, travelled by day and night in the cars and had to stop often in small towns where he was unable to find the comfortable fare to which he was accustomed at home. He ate, therefore, very little and the most simple food; only once he was tempted to partake very freely of a dish of baked beans and peas which he relished. But this kind of food to which he was unaccustomed, seemed after all not to agree with him. He felt oppletion in his stomach, occasional nausea and vomiting, became restless and feverish and determined to return home. Once at home, he thought by strict diet and rest for one day to overcome his indisposition, but finding that he grew worse instead of better, he sent for me the same night and I found him in the following condition:

The patient was very restless and feverish and complained of some pain in the abdomen, but far more of a violent and excru-

ciating pain in the spine from the dorsal vertebræ upwards, which seemed to increase sometimes in short paroxysms resembling opisthotonus. On examining him by pressure with the fingers over the whole spine no spot could be found in any of the vertebræ where the disease might be located; the sensorium was perfectly free. The abdomen from the pit of the stomach down to the navel was very sensitive on pressure and slightly tympanitic; but the most sensitive part was a point several inches to the right of the navel, where a cord like and thickened intestine could be felt, from whence the pain seemed to radiate. The stomach was most irritable, rejecting everything, even cold water. In considering the diagnosis, I rejected first by exclusion, a simple gastric, catarrhal or bilious disorder, neuralgia, colic, poisoning, incarcerated hernia, meningitis, tetanus, mechanical injury to the bowels, typhlitis or any other antecedent inflammation of the intestines, and came to the conclusion that I had before me a most acute intussusception in a portion of the thinner intestines, brought on by an indigestion, and secondary affection of the spine by reflex action. If the first could be removed soon, the second would give way also. To obtain this result I put the patient first of all on absolute diet, allowing no food or drink whatever, only small pieces of ice to allay his thirst and ordered perfect rest in bed. When some indigested food or foreign body is driven into the narrow upper intestines, thereby causing pain, congestion, unequal contractions and intussusception, the invaginated part will still increase that spasmodic action which ought to be moderated or subdued by all means. Sedatives and antispasmodics are therefore indicated in this stage of the disease. For this porpose, I prescribed an emulsion with bitter almond water and laudanum to be taken often, but in very small doses with ice and ordered oil of hyosciamus with mercurial ointment to be rubbed over the affected part of the intessine and frictions to be made on the spine with chloroform liniment. As the patient had some straining in the lower bowel, but no operation, I applied myself an injection of nearly a gallon of tepid soap water with oil. I did not use for that purpose the now so fashionable long elastic tube worked by gravity, because it is not always on hand and its deep introduction not always without danger. I prefer the common rubber ball syringe, but place the vessel with the liquid one or two feet higher than the anus, so that it is worked both by gravity and force of hand. The

injection brought forth a great quantity of normal faeces and seemed to have emptied all the thicker intestines, but produced no decided relief. The sedatives with strict rest and abstinence, were continued the following day. One quarter of a grain of morphine was put every three hours on his tongue with a little ice which was well retained and gave more ease but no sleep. As in the beginning of his illness he had complained of a bitter taste and he had no further action of his bowels, I gave him on the third day the morphine with calomel—2 grains of morphine with 20 grains of calomel in eight powders—one powder every three hours. They were also well retained, produced some action of the bowels and for the first time in the night a long, sound sleep. The next morning the local symptoms in the abdomen as well as the reflex action in the spine had simultaneously disappeared. The swelling at the point of intussusception seemed to be quite reduced and the patient craved food for the first time. It was the beginning of convalescence. At first he was allowed only some milk and other liquid food in very small quantity, but as he digested it well, his diet was improved cautiously every day. His bowels were kept open by castor oil, but he still took some morphine every night sufficient to produce sound sleep. For a week longer he was obliged to be very cautious in his mode of living, but gradually regained his former good health and strength completely and is now as actively as ever engaged in his accustomed business life. All traces of the disease have disappeared.

Article LIV.

Summary of Monthly Reports of the Medical Department of the Southern Illinois Penitentiary, Chester, Illinois, for the six months commencing August 1., 1881, and ending January 31. 1882. Service of H. Z. Gill, A. M., M. D., Physician to Southern Illinois Penitentiary.

Months.	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Remarks.
Average Number of Convicts	354.0	356½	354.0	347¾	357¾	382.0	389.0	St L.
Temp. Maximum	101.5	104.0	100.0	85 5	69.5	61.5	69.0	69.0
Temp. Minimum	63.5	65.0	50.5	43.5	16.5	18.0	10.0	6.2
Temp. Mon. Mean.	80.5	83.5	76.7	62.5	43.0	40.8	37.6	32.1
Average No. attend'g Daily Sick Call	29.0	38.0	30⅔	17.5-6	14⅔	16¼	27.	....
Aver. No. in Hospital	11.6	10.8	10.0	7.1-7	6½	9⅓	10.2	....
Aver. No. in Sick Cell	15¾	4.5-7	3.0	2.5-9	2.0	3½	5¼	....
Days lost from sickness (Sundays excep.)								
1. In Hospital	297.0	293.0	261.0	184½	165.0	251.0	262.0	....
2. Sick Cell	413¾	128½	76¾	70¼	54 0	94¾	136¾	....
Total	710¾	421½	337¾	254¾	219.0	345¾	398¾	....
Deaths	4.0	1.0	1.0	0.0	0.0	1.0	1.0	....
Number sent to Insane Asylum	1.0	1.0	.....	.....	.....	.....	.....	....
Amount of medical supplies issued to Convicts	Aver. per Mo $76.39	$76.39	$65.49	$65.49		$65.49 to Jan 10.	?	....
Antiperiodics	Aver. per Mo $25.60	$18.00	$12.39	$12.39		$12.39	$9.70	.....
Number of men fed by the Med. Department	6 Mo. $68.00	.....	.....	.....	.....	.....	.....	....
1. In Cell House	.....	.....	107½	112.0	122.0	241.0	253.0	....
2 In Hospital	.....	.....	307½	317.0	253.0	444.0	444.0	....
Total	.....	.....	415.0	429.0	375.0	685.0	697.0	....
Gallons of milk issued	.....	.....	55.0	90.0	85.0	101½	112.0	....
Hospital.								
1. *Medical.*								
Intermittent fever	.....	15	5	3	1	2	3	....
Remittent fever	.....	2	2	5	3	3	2	....
Typhoid fever	.....	1	.....	1	1	2	1	....
Diarrhœa, chronic	.....	2	5	1	0	1	1	....
Consumption	.....	.....	.....	.....	1	.....	.....	....
Other cases not here noted	.....	.....	.....	.....	.....	.....	.....	....
2 *Surgical.*								
* Removal of R. Eye	.....	.....	1	.....	.....	.....	.....	....
Piles	.....	.....	2	3	2	6	3	....
Fistula in Ano	.....	.....	1	1	.....	.....	.....	....
Paracent's Abdominis	.....	.....	1	2	.....	.....	.....	....
Rem. of tumor fr. face	.....	.....	.....	.....	1	.....	.....	....
Operation on Eyelids	.....	.....	1	.....	.....	1	.....	....
Paracentesis thoracis	.....	.....	.....	.....	.....	.....	1	....
Palmar abscess	.....	.....	.....	.....	.....	.....	1	....
Fracture of right leg	.....	.....	.....	.....	.....	.....	1	....
Strangulated inguinal hernia right side	.....	.....	.....	.....	.....	.....	1	....
Bubo (syphilitic.)	.....	.....	.....	.....	.....	1	.....	....

A number of minor injuries and operations not enumerated.

* The patient from whom the eye was removed had suffered severely at times for many years. He has been entirely relieved since the operation. The eye was blind.

REMARKS.

The temperature was not taken with sufficient accuracy here except for the month of January, as may be seen for that month which compares favorably with St. Louis temperature as taken by the government. The other months are from St. Louis reports. Hereafter more care will be given in this matter.

The July report is from the meagre records remaining, and is given by way of comparison; and the number of convicts and temperature are added for the same purpose.

The culinary department of the hospital was added about the first of September. Previously the food was furnished from the general kitchen.

There have been *four* deaths in the *six months* of my service.

The *first* (in Aug.) was a victim of fever (typhoid) brought to the prison sick, after a long confinement in Cairo jail; thoroughly poisoned, and his general health greatly injured.

The *second* was a case of heart disease, severe attacks of which he had suffered before coming here.

The *third* was a case of Bright's disease in an old man. He came here quite sick, and died in less than a week.

The *fourth* was a case of consumption, far advanced when he came, and died in less than two months. Particles of the elastic tissue of the lung were being expectorated when he entered this institution.

The annual mortality as usually computed, would be 21.9 per thousand. New York was 31.7 in 1881.

We have not had a single death from acute disease or fever in any patient who was in fair health when entering the prison unless the *second case* should be so considered.

The typhoid fever cases, though well marked, were not of very severe grade. None of them died who had been in the prison any length of time before being attacked.

The weather was extremely hot in August and September, yet we lost no cases from heat-stroke, though some were severely affected.

Our cases of malarial fever—intermittent and remittent—have been treated with saline aperients, in the cases needing that class of remedies, and cinchonidiæ sulph. either in pill form or in acid

solution. The results have been eminently successful, seldom a second paroxysm occurring after the timely commencement of this remedy.

Some of the cases of chronic diarrhœa were of months' standing, severe in degree, and in old debilitated subjects. The treatment was largely dietary, and in some of the worst cases the diet was exclusively milk. All recovered, some of them beyond expectation. The use of milk in the diarrhœa cases, (subacute and chronic) has given great satisfaction.

The increased number of sick at sick-call and in sick-cells, in January was dependent upon the use of fresh pork and corn-bread to neither of which the men had been accustomed for a long time, and the undue use of which produced diarrhœa of more or less severity and obstinacy.

There has been no case of small-pox in or about the prison, and vaccination has been carefully attended to. Higgins' vaccine virus from the "Missouri Vaccine Farm" has been used mainly; and while it has given entire satisfaction, not a case of difficulty has occurred from its use.

There have been more than a dozen cases of piles, treated by carbolic acid hypodermic injections. Many of them were of years' standing, and they now, even the worst, declare themselves entirely cured. The amount of acid injected was from five to ten minims, dependent upon the size of the tumor. The acid used was the crystalized, with just enough glycerine to hold it in solution. The operation was made slowly, and the needle slowly withdrawn. The course has been mild in most cases, and the results have been entirely satisfactory.

The first case of *fistula in ano* was of long standing, and had been operated on several times before. The track was of considerable length. I divided it thoroughly; dressing first with tinct. muriate of iron to prevent any adhesion of surfaces, and later with cosmoline. The case was entirely cured. The second case was of minor importance.

The "Average per Mo., 6 Mos. $68.00," in July column refers to quinine alone.

Article LV.

NOTES ON CASES IN GENITO-URINARY SURGERY.

—Case No. VII.—

Contraction of large Calibre in the Penile Urethra.—Chronic Prostatis.—Sphincterismus.—Narrow Meatus.—Meatotomy.—Use of Cupped Sound in Conjunction with Dilatation.—Recovery. By W. Hutson Ford, M. D., of St. Louis.

R. E. B., æt. 23, a handsome and well-nourished young man, first presented himself on April 29, 1879.

He had been addicted to masturbation when about seventeen years of age, but had abandoned the practice as soon as he was old enough to know and appreciate its dangers. Had been very fond of women, and indulged altogether too freely with them, some three years ago, when the trouble first appeared. He has never had syphilis or gonorrhœa. He is a drug clerk, and his duties require him to stand a long time during the day. Masturbation.

Suffers from constant pain in the small of the back and throbbing in the perineum. Does not have to rise at night to make water. The stream, he says, is sometimes large and sometimes small. He is very despondent, and has been treated by various physicians, for kidney disease. He admits, however, that he has not been as frank to these physicians, in detailing his symptoms and past history, as he had been to me.

The prostate is considerably enlarged and quite painful on pressure, which also induces a desire to urinate. There is decided sphincterismus; the bowels are regular. Prostatic Congestion.

The urine is very acid, of amber color; and lets fall some strings and flocculent deposits of mucous. The penis is small and so are the testicles. The calibre of the meatus is only 20; there are several resisting points, at each of which the urethra is exceedingly sensitive. Indeed, the entire urethral tract is very hyperæsthetic. Urethral Hyperæsthesia.

Meatotomy to 28; c. s. 26 passed into the bladder.

Meatotomy. This gave great pain.

Ordered, diluents and alkali; iron, strychnine and ergot.

May 2nd, 7 P.M. B. B. 28 passed through meatus. He states that he suffers from great depression of spirits, after coitus. Some months ago he suffered much more from the pain and throbbing in the prostate than he does now.

May 7th, B. B. 28 passes to the bulb. B. B. passes the bulb, but not very easily. C. S. 23 passed and retained three minutes.

The subsequent history of the case is as follows: The sound was systematically passed for six weeks or two months every third or fourth day at first, and afterwards more frequently, with occasional passages, once a week of a full-sized cupped sound anointed with ointment of cocoa butter and tannin ʒi to ʒi. Cold baths night and morning, and tonic treatment. Occasionally he took some bromide of potassium, chloral and cannabis indica at night. He gradually improved, and became at length so well that his pain in the back left him entirely, and all his symptoms disappeared, only to recur after some

Recovery. imprudence, excess or unusual fatigue. The hygiene of the urethra was explained to him. I saw him in June, 1880, twelve months afterwards, and prescribed for him for a bilious attack. He had entirely gotten over his former troubles, was now very continent. He was stout, had lost his worn and haggard expression, slept well, and was in all respects greatly changed in appearance for the better.

Article LVI.

Spontaneous Fractures. By Pinckney French, M. D., Mexico, Missouri.

Since the management of fractures is rightfully regarded as one of the gravest duties of the surgeon, the consideration of anything in relation to their nature is of the utmost importance. While fractures in general are of very common occurrence, the subject of this paper, so far as my reading extends, is exceedingly infrequent,—in fact, it has been a matter of some controversy as to whether fracture of bones can be produced solely by muscular contraction. Of the instances on record,[1 & 2] the fractures in many are subject to no other manner of explanation. In a recent author, [3] are mentioned four cases. One in a man thirty-four years of age and in another forty-four, and in two the ages not given. Another author, [4] mentions the case of a man thirty-one years of age, where the humerus was broken in the act of throwing a chip. A female seventy-three years of age, femur was broken while turning in bed. A male thirty-two years of age, femur was broken in an effort at pulling off his boot, and again fracture in same bone a few weeks thereafter by striking against the bed. Three cases of fracture of humerus in well-developed and muscular subjects during feats of strength—ages not given. Same author reports a case in a subject where we should expect flexibility of bone, owing to preponderance of animal substances which they contain at this period of life, viz.: in a boy twelve years of age, both femurs were broken during an epileptic convulsion. It occasionally happens that the humerus is broken by a person striking at but not hitting another, or that the clavicle is fractured by a rider giving his horse a backhanded blow. [5] Same author mentions a case of a gentleman

1. Collation Cooper's Surgical Dictionary.
2. Summary Hamilton on Fractures and Dislocations.
3. Holmes' System of Surgery, Vol. I.
4. Gross' Surgery, Vol. I.
5. Erichsen's Surgery.

a little above fifty years of age, apparently in perfect health whose thigh was broken with a loud snap while turning in bed. And what is still more remarkable, intra-uterine fractures of the bones of a healthy fœtus are accounted for by abnormal muscular contraction, [6 & 7]

We need hardly admit that our knowledge of the real pathology of the morbid changes in osseous structures in these affections is obscure, which is owing mainly to want of opportunity to examine specimens after accidents of this kind, and we do not propose entering into a discussion of any length regarding it. But since it is the generally received opinion, [8] that no long bone can be broken in its shaft by the mere contraction of its muscles unless impaired by some morbid change in its structure and inasmuch as this opinion is sustained by all recorded reports which we have had the pleasure of perusing, we will mention the diseases that affect the general system in such a way as to be regarded as predisposing causes of these accidents. We may add before so doing, that a careful research of books within our reach discloses some conflict of opinion in this regard, but the weight of authority undoubtedly favors impairment of osseous structure. And while such impairment is generally present, it would seem that it was not at all necessary to the production of fracture, and therefore, technically speaking, deserves recognition and consideration only as a predisposing cause. "Cancer, syphilis, scurvy, rickets, mollities ossium, scrofula and lastly, (by some of our old authors) gout and rheumatism" have been enumerated as predisposing causes. From a careful consideration of all the cases reported, we may hold it as highly probable, that in the majority of instances the bones are merely affected through defective nutrition. The bones which usually suffer spontaneous fracture are humerus, femur, clavicle, radius, ulna, tibia, ribs and sternum, named in the order of their frequency. Bones commonly fractured by muscular effort and that solely are patella, os calcis and olecranon. The cause of fracture is usually regarded as exercising considerable influence over its subsequent course and results [9] hence it is something remarkable that in the cases under discus-

6. Holmes' Surgery, Vol. I.
7. Holmes' Diseases of Children.
8. Holmes' Surgery, Vol. I.
9. Holmes' Surgery, Vol. I.

sion, recovery takes place quite as soon as in ordinary fractures. [10]

Thus imperfectly noticing a subject of so much importance to the surgeon, we report the following case:

On Oct. 12, 1881, we were summonsed by Dr. Holly, of this County, to visit a lady thirty-seven years of age—a well-developed, muscular, healthy looking little woman. On the evening previous to our visi , and and while dancing a waltz, she heard a snap noise and felt her left thigh give way. She was supported by her companion in the dance until a seat was procured, from whence she was placed upon a bed, and Dr. J. J. Holly, of Benton City, was requested to visit her. In company with the Doctor, we saw the lady about 11 o'clock the following day. She stated she did not come in contact with, or strike anything at the time of the accident, and at the moment her limb gave way she was neither in rapid motion nor making extra efforts to glide or turn herself. Investigation disclosed fracture of upper third of left femur just below trochanter major. Some swelling and tumefaction was present, which to a certain extent precluded an accurate understandiug of the condition of the broken bone as to size, etc.

A temporary splint was devised, and after fracture was properly adjusted, was placed upon the limb. All of the splints of which we were then possessed being in use, we were compelled to seek one in St. Louis, Chicago and then New York City. Owing to the delay thus occasioned, the limb was allowed to remain in the temporary apparatus until the eleventh day after receipt of injury.

During the application of the splint, it was observed that the bone fragments were agglutinated so much so, that by careful manipulation they did not suffer displacement while readjusting the limb. We used endless screw straight splint extension by adhesive strips, counter extension by perineal band. On Nov. 24, 1881, splint was removed; on Nov. 27, two days thereafter we visited the case and found union of bone was not of sufficient firmness to preserve shape and position of the limb. Reapplication of splint was made, omitting counter extension. On Jan. 5, 1882, splint was removed and starch bandage applied, which was allowed to remain about two weeks, when union was perfect with no appreciable shortening. She now uses crutches, fearing

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the limb is not sufficiently strong as yet to support the whole weight of the body.

Interrogatories were instituted and elicited the following: no cancer, no scrofula, syphilis, scurvy, mollities ossium, rickets or any hereditary disease in the family history. Had enjoyed good health but suffered from what her family designated rheumatism, had much pain almost constant at or near point of fracture deep seated and particularly severe at times for several weeks prior to the accident. Her history disclosed nothing upon which to predicate such an opinion. She furnished no evidence whatever that she had suffered an attack of acute rheumatism. No chalky deposits about the joints and enjoyed apparently the best of health with the exception of the pains of which we have just spoken. These pains or similar ones annoyed her considerably during confinement. Resort was had to liniments for relief. Owing to the tardiness of firm bony union, recourse was had to the administration of Hypophosphites with elix. gentian and ferri; she is now free from all pain but the shaft of the broken bone appears much enlarged throughout its entire length. On the part of Dr. H. and myself we desire to return thanks to Drs. Hamilton and Dodson of Mexico for valuable assistance in the treatment of this lady.

Translations.

Article LVII.

FROM THE FRENCH.

Excerpts from Late French Journals. [Translated for the Journal.] By A. H. Ohmann-Dumesnil, A. M., M. D., of St. Louis.

Actinomycosis Hominis.—Prof. Ponfick, of the University of Breslau, has published a monograph, the most complete up to the present, on the above new infectious disease. M. Vanlair makes the following interesting resumé:

This infectious disease is only known as such since a couple of years. After giving a history of its discovery and description by several authors amongst these being Bollinger, Israel, and others, the following are given as characteristics of the disease:

1. The disease begins generally in the *facial region* and the *superior part of the neck*, notably by the *teeth* and *alveolæ*. From this the lesion gradually descends towards the chest, abdomen and pelvis, giving rise to peri and para-pleuritis, caries of the vertebræ and ribs, psoas abscess and peritonitis.

2. It causes the formation of *metastatic foci* in different viscera, notably in the heart, liver and lungs.

3. It is locally characterized by the existence of burrows with fistulous tracts which differ from cold abscess in several particulars. Thus, the *orifices* of the fistulæ are numerous, of irregular form and surrounded with a skin excessively thin, flaccid, bluish, with serrated edges and without inflammation of the interposed tissues. If a probe be introduced it is lost in a *labyrinth* of fistulæ whose walls are covered with fungous granulations. Despite this anæmic appearance, these granulations are dotted with yellowish white spots representing the remains of former extravasations. The *secretion* is serous and it can only be brought out by repeated pressure. It is in this secretion that the characteristic grains are found.

4. The *course* of the disease is generally slow. The mean duration is one year.

5. Some patients recover, but the majority *die* in a marasmic state complicated by amyloid degeneration; others are carried off by pyemic accidents; others by cardiac, hepatic or pulmonary complications.

6. If the above do not suffice to recognize a case of actinomycosis hominis, recourse may be had to *inoculation*. The bovine species is especially susceptible to the fungus whose introduction in the subcutaneous or intermuscular tissues or in the peritoneal cavity, has given rise in the calf, to the developement of numerous actinomycetic tumors, found primarily about the point of inoculation and later propagated to distant points. Injection in the blood has produced pulmonary foci. It takes but a month to make the lesions manifest themselves. The rabbit and dog appear to enjoy immunity from this source of infection.

The fungus called *actinomyceton* has not been definitely classified as yet, the number of cases observed in man of actinomycosis being up to the present 17. In the serum of pockets and fistulæ are found small light yellow granules formed by the fungus and in suspension, which are pathognomonic. The fungus is visible to the naked eye and does not act as an inflammatory product, but as a neoplasm. The tumors always contain the morbific agent; and, like all tumors of a destructive tendency, die in the center whilst growing at the periphery, and constitute a transition between internal zymotic diseases and the malignant neoplasms. The author would assign it a place in nosology immediately following syphilis, farcy and leprosy.

The treatment is entirely surgical. The diseased teeth must be drawn and the alveolar wound disinfected. In certain cases enlarged tonsils must be removed. If a tumor is formed it ought to be removed immediately, for as soon as the disease is generalized all interference is futile.

Prophylactic treatment consists in the removal of infected animals and in proper care of the teeth. Of course, the habitat of the fungus outside of the organism, must be found to establish a true prophylaxis.—[*Bulletin de l'Acad. Royale de Méd. de Belgique.*

ROASTED COFFEE AS A DISINFECTANT.—Dr. Barbier, of Algeria, calls attention to the highly disinfectant properties of the powder of roasted coffee. He has used it upon decomposing cadavers with an immediate cessation of the disagreeable smell. He claims good results from its use in cases of ulcers of a bad nature and thinks that it might also prove valuable in anthrax, etc. Many to whom he has recommended this agent have expressed themselves as well satisfied with its action. The author does not attempt an explanation of the *modus operandi* of the disinfectant, but doubtless some one will soon determine this, if its value as an antiseptic becomes such as to warrant a research.—[*La France Médicale.*

ARTERIAL ELASTICITY.—M. Arloing has measured the power of arterial elasticity, by counting the number of seconds during which the elasticity alone suffices to keep up the circulation of the blood. The heart being stopped by galvanization of the pneumogastric, he has seen the blood-current move for 9 to 10 seconds, which authorizes him to say that each arterial systole does not simply return the impulse which it has received.—[*Progrès Médical.*

A SYMPTOM IN THE BEGINNING OF PREGNANCY.—Dr. Delattre thinks that sufficient importance has not been given to the significance of a phenomenon occurring at the beginning of pregnancy. This is the almost complete disappearance of phosphates from the urine. If search be made for them it will be found that, but a very small part being utilized for the development of the fœtus, during the beginning of pregnancy they are condensed almost entirely in the bones which they augment in size by forming osteophytes, considered erroneously for a long time as an error of nutrition, or increase them in weight.

During the latter months, the fœtus develops rapidly, and these reserve materials are drawn upon. The bones tend to regain their former weight and the osteophytes gradually diminish, and disappear entirely after the first months of suckling, during which time they have contributed to maintain at a normal figure the phosphates of the milk.

He advises giving phosphate of lime to pregnant women, especially to such as are badly nourished. He cites a case in which dentition first appeared in two children at eleven months. During the third pregnancy, the mother took phosphate of lime, and the child had its two first teeth at four months.

The author cites a number of examples corroborative of his views and insists that practice has clearly demonstrated the correctness of the above conclusions.—[*Gazette des Hôpitaux.*

CYANIDE OF MERCURY IN OCULAR SYPHILIS.—M. Galetzowski has noticed the remarkable efficaciousness of injections of cyanide of mercury to combat certain localizations of the syphilitic diathesis in the membranes of the eye. In cases of atrophy or neuritis of the optic nerve, or alterations influencing the choroid or the retina, ordinary specific treatment is often impotent and the albuminate of mercury, which he has experimented with in conjunction with M. Fournier, possesses but little more value. In several cases of iritis, choroiditis and even of atrophy of the papilla of syphilitic origin, cyanide of mercury has given very good results.—[*Progrès Médical.*

GENERALIZED HYPEROSTOSIS.—M M. Rathery and Leloir report a case, in the *Revue Mensuelle de Médicine*, of symmetrical generalized hyperostosis in a man aged 30, and apparently exempt from all diatheses. The affection which is extremely rare, appears to have begun with the skull and to have extended progressively to nearly all the bones of the skeleton. The head is increased in size, but there are no irregular exostoses on the skull, whose walls are very much thickened. The bones of the face are intact except the horizontal rami of the inferior maxilla which are increased in volume and the patient feels acute pain here. The scapulæ, clavicles, humerus and ulnæ are increased in size. The radii, carpi and phalanges are normal. There is also increase of volume in the bones of the thorax, pelvis and femurs; the tibiæ are markedly affected, being three or four times the normal size. Outside of this, the general state is good. However, there is a pronounced intellectual torpor; the patient is easily fatigued, and he somtimes has œdema of the legs in the evening, when he has walked. He often feels acute pains in the affected bones, which are either spontaneous or provoked by pressure. He sometimes suffers ataxic pains in the superior or inferior members.

But three other similar cases have been found recorded by the authors and all present about the same characteristics, never appearing before the age of 17, there being no special diathesis and no heredity.

The symptoms due to compression of the brain are the same. The various treatments employed have never furnished any special results.—[*Jour. de Méd. et de Chirurg. Pratiques.*

Article LVIII.

FROM THE PORTUGUESE.

Study of the Etiology and Nature of Beriberi. By Dr. A. Pacifico Pereira. Translated from the *Gazeta Medica da Bahia*, for the Journal. By Joseph Workman, M. D., Toronto, Canada.

It is especially the red corpuscles of the blood that serve as the vehicles, and he says everything indicates to us that the alterations shown in animals subjected to the action of a high degree of temperature depend upon the affection of these elements. We should not expect to meet in them gross morphological alterations; the processes of dissociation which here play the principal rôle, are probably special. Experience in pathology has demonstrated that the red globules of the blood die in a high temperature. Under this action the urine becomes dark, the red corpuscles are destroyed; according to Schultze and Westheim, and according to Mannassein, they are reduced in size and quantity. This high temperature action on the red globules of the blood, augments directly the hurtful influence of heat, by decreasing the quantity of the inspired oxygen. The experiments of A. Schmidt, on Guinea pigs, show that the blood of the heart of animals, killed by high temperatures, never contains, immediately after death, any oxygen. According to the same experiments, the blood in animals that have died after breathing for a considerable time, in an elevated temperature, contains hæmoglobin without oxygen, and no oxyhæmoglobin, or but mere traces of it. The consequence, he says, of this high temperature influence, hurtful alike on the morphological, physical and chemical sides, is failure of oxygen.

The delatorious effect on the organism is produced gradually and it increases with the duration of the action, so that in correspondence with this progressive alteration, morphological and chemical, the red globules of the blood, convert each time, a less quantity of carbon into its terminal products. The experiments

of Erler and Litten completely prove this; in one of these the animal expired normally, 0.570 grammes per hour, of carbonic acid. After two hours stay in an atmosphere of 38° C., the quantity came down to 0.32 gr. per hour, and after two hours more, it hardly reached 0.296 gr. Litten met with two alterations, as constant effects of high temperature on animals, in his whole series of experiments,—fatty degenerations, and disease of organic oxydations. Pettenkofer and Voit have demonstrated that in the animal body, in normal conditions, albumen may pass into fat, inasmuch as after the separation of nitrogen, the whole of the remaining non-azotized substance is not oxydized, and changed into water and carbonic acid, but from defect of oxygen it becomes in part retained as fat.

Hoppe-Seiler (*Medizinische Untersuchungen*, 1866–1871), says: "Fat appears to be formed in the organism principally when the receipt of albumen in relation to that of oxygen, exceeds the normal, or when with a normal receipt of albumen, there is a decrease of oxygen, from obstacles in the sanguineous circulation or in the respiration."

According to the explanation of Voit, the phenomenon of fatty degeneration is not essentially distinct from the formation of normal fat, excepting that in the former there is an insufficient oxydation of fat proceeding in normal quantity from the albumen, or an increase in the decomposition of albumen, from which there proceeds a larger quantity of fat than is oxydized. Accepting the latter hypothesis, which is justified by the increase in the elimination of nitrogen, it now remains to us to know what the cause is of augmentation in the decomposition of the albumen.

Frankel (*Archiv. f. Path. Anat. von R. Virchow*, Vol. 67) has shown that in a series of pathological processes, due to defect of oxygen, (through increase of temperature, asphyxia from certain poisons etc.) the albuminoid matters are abnormally decomposed, producing a larger elimination of nitrogen. The nature of the chemico-pathological process is then understood to be due to an excess in the decomposition of albumen, through deficiency of oxygen. As to the nitrogen, it is eliminated in the form of urea, but the non-nitrogenous elements, not being oxydized as far as their terminal products, they remain deposited in the organs in form of fat.

"The conditions which preside over the process, form a chain

of phenomena," says Litten, "intimately connected—diminution of entry of oxygen, increase in the decomposition of albumen, diminution in the elimination of carbonic acid and fatty degeneration." All these manifestations of impediment in assimilation and disassimilation may be regarded as dependent on the primordial agent—the elevation of temperature and its deleterious influence on the animal tissues, especially on the blood and its red corpuscles."

In order to demonstrate that fatty degeneration depended on diminution of the processes of oxydization, Litten varied his experiments. Having kept the animal for three days under the action of a high temperature (37° C.), he determined the quantity of carbonic acid expired, and he found it less than he had met with (0.054 per hour in an animal whose weight was 100 grammes); on killing the animal immediately, he found, on dissection, "*all the parenchematous organs in intense fatty degeneration.*"

Having kept another animal for three days in a temperature of 37° C., and found that it expired the same quantity of carbonic acid as the first one; he placed it afterwards in a more temperate atmosphere, and he found that the quantity of carbonic acid exhaled had become treble that of the first. After keeping the same animal four hours in the temperate atmosphere, he found merely slight traces of degenerations, thus showing, by contrasting the two experiments, that the removal of the animal from a high temperature to a lower, although it had previously been affected with fatty degeneration, caused it to disappear in two days, during which a notable increase took place in the expiration of carbonic acid. This fact of the expired carbonic acid, was verified in other experiments, in which the quantity was determined,first, in the normal temperature; second, during the stay in the apparatus, under high temperature; third, after restoration to the normal temperature.

"The increase in the expiration of carbonic acid, after the restoration of the animal to normal temperature, did not appear accidental,—" says Litten, "it was due to a physical process which plays an important role in the convalescense."

The body, hungering for oxygen, satisfies itself by large inspirations, and as soon as the cause ceases, (the high temperature) which bronght the famine, by depriving the body, of this vivifying agent, the blood becomes richer in oxygen, the

process of oxydation becomes active, and in this manner it is rendered possible that the combustible hydro-carbon which had accumulated, shall, on the more free entry of oxygen, be completely consumed. "This is, in my opinion," saysLitten, "the process of restoration of the organs in fatty degeneration."

Leyden found in some convalescents, an increase in the expiration of carbonic acid, which he attributed in part to a greater quantity of hydro-carbon elements. But in the experiments of Litten, this cause was completely excluded, for the animals did not receive any food, and the same phenomenon was presented under the influence of air more oxygenated, thus showing the greater activity of the combustions.

In poisoning by the oxide of carbon, fatty degeneration was verified by Klebs, in numerous autopsies, (*Virchow's Archiv.* Vol. 32.)

Alcohol produces similar effects. In poisoning by phosphorus, also fatty degeneration, according to Frankel, Baur and others, the same series of phenomena are produced; they commence with diminution in the oxygenation of the blood, and a lowering of the production of carbonic acid.

It is the globular part of the blood that suffers the most profound attention in these poisonings, and the red globules become incapable of carrying the oxygen which has to serve for the nutrition and regeneration of the tissues, and the elements which ought to be eliminated, oxydized to terminal products, remain unconsumed, and deposited in the form of fat.

[TO BE CONTINUED.]

Proceedings of Medical Societies.

Article LIX.

ST. LOUIS MEDICAL SOCIETY.

Taken by the Journal's Stenographic Reporter.

Saturday Feb. 11th. 1882.

Why We Have Two Eyes and Two Ears.

Dr. Williams.—Mr. President: It may be interesting to ask why we have two eyes and two ears. At first thought probably, the gentlemen will not be able to determine the question. Two eyes are necessary to enable us to judge of distance. With two eyes we are enabled to determine with greater accuracy how far an object is from us. This is proven by many instances where persons lose one eye suddenly from any cause. Such persons, in trying to pick up small objects very frequently miss the distance; for instance, such a person, in trying to pick up a pin, is more likely to overreach or fall short of the object, than he is to miss it from right to left, because such persons are able to judge of direction but not of distance.

Two ears are necessary to enable us to judge of direction. It is an absolute certainty that a man with only one ear can not tell from whence a sound comes. This fact was forcibly brought to my mind this week by the examination of a gentleman from the country, who, some years ago, lost the hearing in one of his ears by the explosion of a gun; there was some internal injury to the ear that destroyed it. He told me that he was in the habit of hunting squirrels, and since he has been deaf in one ear it is a matter of necessity that somebody should go with him always, because he had a nice squirrel dog that he took with him, and this dog would run about through the woods and tree a squirrel, and the man could hear him bark but couldn't tell where the dog was, he couldn't determine at all what direction he was from him. He had to take a second person with him to enable him to find the dog after he had treed a squirrel.

Another person whom I recently examined, from Texas, had some cattle running at large in the neighborhood where he lived, and on one of these animals he had a large bell. One day he went to find the cattle but didn't know where they were. He could hear the bell but couldn't determine where the sound came from; and he hunted fully half a day, within hearing of the bell, for this herd of cattle before he found them, simply because he had but one ear and couldn't tell the direction of the sound.

These things illustrate to us positively that two ears are necessary to determine the direction of sound; while two eyes are necessary to determine distance. These are well established facts.

DR. POLLAK.—I would like to ask the gentleman if he has observed that a person who has lost one ear could educate the other ear to determine the direction of sound; or that a person who is blind in one eye can educate the other eye so as to measure distances?

DR. WILLIAMS.—I will say, that a single ear is never educated so as to judge of direction of sounds; while a person who is blind in one eye gradually learns to correct this wrong impression as to distance.

DR. JOHNSTON.—I would like to hear the experience of the president.

DR. DICKINSON, the President.—The chair will simply state that he has heard a great many complaints corroborative of what has been stated, in the main, in reference to the eye; but the difficulty of determining the direction of sound has not been so forcibly brought home to my mind as it seems to have been done to the mind of the last speaker. Unquestionably the eye admits of education to a very great extent, perhaps so as to overcome this difficulty; but certainly it must be a matter of education, and after considerable experience, the inability of a person who is deaf in one ear to determine the direction of sound has not been so forcibly brought home to me.

DR. JOHNSTON.—This is a novel question to ask. We might ask why do the fish in the Mammoth Cave have no eyes? Why is it that mud-fish have no eyes? The fact is they have no need of eyes, they are not necessary to their existence, and therefore they do not have any. But so far as my observation and acquain-

tance goes, a gentleman with one eye can see as well as I myself, and is just as capable of judging of distance. I have been laboring under the idea that two eyes, two nostrils and two ears was a provision of nature, that if we were injured in one, the other would compensate. Several cases have come under my observation where one testicle has been lost, and the men had just as many children as if they had had two. I take it that these are compensating organs. Why it is so I cannot tell. Now it is very evident that if I am addressing you, and the tympanum of this ear is destroyed and the wave of sound strikes the deaf ear, there will be no response to the sound; but if you turn your head so as to allow the sound wave to strike upon the tympanum of the other ear you will be able to judge of the direction of the sound. So if one eye is destroyed, both eyes having the same origin in the optic nerve, we have another to compensate. So if one eye is lost the other becomes more developed, more sensitive. In 1837 I saw Dr. Dudley operate for congenital cataract in a young man about 21 years of age. He restored his sight completely, in both eyes, but he had no idea of distance; he did not know how far he was from the wall, but would step backward and forward, until his experience taught him the fact.

Dr. Williams.—Did he operate on both eyes?

Dr. Johnston.—Yes, sir; both eyes were restored. It was a very remarkable success; the man had been stone blind. So that the deficiency which the doctor speaks of will not answer the question why we have two eyes. I don't think that the few observations of my friend are sufficient to determine the fact. By the laws of evolution, as the animal is developed nature sees fit to give two eyes where two eyes are necessary to the animal existence; and where they are not needed she gives no eye at all.

Dr. Stevens.—I had a little experience that may perhaps be of some importance, I don't know that it would decide the question at all. Many of our older physicians will remember that some 25 years ago I suffered two or three years with ophthalmia. There was perfect opacity of the cornea of the left eye at one time, and it remains to a certain extent at the present time. But what I wish to state is this, while the opacity was so great that I could see nothing distinctly—I could not see the outline of an object with that eye—I couldn't take hold of an object correctly. I first observed it in taking a cup of tea from my wife, she sup-

posed that I had hold of it and letting it go, it fell to the table. That continued for several months, I had great difficulty in grasping an object. I would grasp to one side of it; but at the present time I discover no difficulty at all.

It is a remarkable fact that nearly all the organs of the body are duplicated, the brain, the penis, the uterus are double, although forming but one organ. The uterus, and the male organ of generation are double organs; and the brain is as distinctly double as it can be, and the parts perform, perhaps, different functions. Very interesting psychological phenomena are connected with this fact; and the fact is adopted, I believe, by the specialists and by the profession at large, that insanity never occurs so long as one side of the brain is perfect. One side of the brain may be completely destroyed, and the mind will not be affected unless the disease extends to the other hemisphere. So long as one is intact insanity cannot occur.

DR. FAIRBROTHER.—In answer to the question, "why have we two eyes?" it may be replied that, on account of the laws of light, of its refraction and aberration, two eyes are better than one. Thus there is a demand for them; and all nature is governed by the law of supply and demand. In the evolution of animal life some are cast upon dry land, while others find their home in the sea. Upon those of the land, legs become developed, and upon those of the water, the organs of swimming. Every organ of every living thing is the result of the demand produced by its surrounding circumstances. A bird would never have wings if there was not a demand for it to fly. In the carnivorous animals we find long and sharp teeth developed, while among the vegetable feeders these are wanting. In the economy of nature whatever is demanded will be supplied. And, on the other hand, we observe that when the demand for an organ ceases, that organ will in the course of generations, disappear, or so nearly so as to leave only the rudiments behind. Such are the laws of light that two eyes are demanded. If these were different, one eye might answer. If we had no light at all we would finally have no eyes at all. I do not agree with Dr. Johnston in the theory that we have two eyes in order that if one should be injured or lost, its place may be taken by the other.

DR. GREEN.—Instead of putting the question as Dr. Williams did: "Why have we got two eyes and two ears?" let us go back

and ask why is it that a body is constructed symmetrically? Why are the organs of the body formed of symmetrical halves united at the median line? As Dr. Stevens says, the penis, the womb and the brain are formed of two halves. In the abdomen the symmetry is somewhat disturbed, but there is still something of a symmetry. I think it is the result of this very law of symmetry which obtains in the very commencement, as soon as the cell begins to fill. I think the question should not be, why have we two eyes and two ears? but why are we built symmetrically.

Dr. Williams.—A portrait painter with one eye can get along very well because it is not necessary for him to judge of distance. In the case of Dr. Stevens, he was unable to judge of distance and therefore the cup of coffee fell to the table. I have often observed persons with only one eye walking along and when they come to a rise in the sidewalk they knock their feet against it, or if there is a step they will stumble, because they can not judge of the distance. I do not say that this is the only reason why we have two eyes and two ears.

Dr. Hurt.—I doubt whether it would be proper to accede to Dr. Williams' proposition without some qualification. I think somewhat with Dr. Green, that the reason why we have two ears and two eyes, is because we possess a dual organism, that we are symmetrical, though I believe that some people are not exactly symmetrically developed, not so largely developed upon one side as they are upon the other; they are not symmetrical so far as size and perfection of development are concerned. I think the reason why we can not judge of distance accurately with one eye is because we are educated to the use of two eyes in the prehension of objects. We discover this after we have lost one eye, and we can not positively say that this defective judgement of distance will hold good with persons who have never had but one eye. It is the result of education; and it is said that it is much more difficult to unlearn, than it is to learn a thing; that is an adage that I used to be familiar with when I was a boy, and therefore, it was thought necessary to learn things right when we did learn them. If we are educated to the use of two eyes, we find it much more difficult to adjust our movements correctly with the use of one eye only. As to the necessity of two ears in judging of direction, I am not well satisfied, though possibly education has nothing at all to do with that. I had some

experience when I was quite a lad, which this discussion brings to my mind. My father lived in a woodland country, sparsely settled, and we used to let the cattle run out in the wild range in the summer season, and it was necessary occasionally to hunt them and not allow them to stray too far from the premises. Frequently I would be sent to hunt up the cattle early in the morning; they were usually about a mile and a half or two miles from home, and sometimes in going up a valley with a succession of hills upon each side sloping into the valley, I would stop and listen every once in a while for the bell. I could hear it, and I was positive that it was up in the mountains on that side. I would perhaps go a quarter of a mile or so in that direction and get on some rise of ground and listen, and then I was positive that I heard the bell upon the opposite side. And when I went to the opposite side I could hear the bell upon the other side again. Well, I did not understand it then. Now I know that it was the result of echo; when I was on one side I could hear the echo, when on the other side I heard the bell. The echo was quite a perfect imitation of the bell.

DR. ROSENTHAL.—In connection with this subject I will mention a case that I examined last Thursday afternoon. A druggist of this city brought his little girl to me to have her tested for glasses and he asked me casually to examine his eyes. On examining his eyes I found that the right was a little myopic, but almost normal; on examining the left I found opaque nerve fibres and decided atrophy of the optic nerve. I asked him how long he had been blind in that eye. He was astonished. He didn't know that he was blind in the eye. He attends to his business and seems to measure distances very well. He was actually astonished to learn that he was blind in that eye. He says that he has noticed that he had to turn his head sometimes in looking at objects.

DR. BERNAYS.—No one has touched, during the discussion, upon the only standpoint from which anatomical questions and facts can be satisfactorily explained and decided in the light of modern science. I refer to the theory of evolution based on the fact of natural selection, and the facts of comparative anatomy. You ask the question, why have we two eyes? or, why have we two ears? The question stated in this way can not be answered. The teleological theory utterly fails to explain any fact in anatomy

when you go to the bottom of it; and the only possible way of explaining those facts, is by the theory of evolution and natural selection.

Venesection in Puerperal Eclampsia.

Dr. Henske.—I want to ask, is venesection necessary or useful in puerperal eclampsia if you have a plethoric subject?

Dr. Hurt.—I will make a few remarks on the question proposed by my friend on the right. I have practiced venesection in puerperal eclampsia, though I have not had perhaps, so large an experience in the treatment of puerperal convulsions as many of you present. The first case that I ever had, I met in 1856 on the open prairie upon the banks of the Humboldt river, nearly two thousand miles away, in an emigrant wagon. The convulsions set in before the child was born. The lady was a primipara, well developed and strong, of about 20 or 21 years of age. We were traveling in the valley of the Humboldt, when late one evening we overtook and passed a company of emigrants and we traveled in sight of each other for two or three days, when an elderly gentleman came into my camp one evening and stated that he was expecting his daughter to be confined, and having learned that I was a physician, he had pushed his teams a little in order to keep in sight of me, for though her mother was a good midwife they were still a little uneasy. I lold him, that being the case, I would make short drives. But it was not necessary, for early in the morning I was called and found that the lady had been in labor during the night, but had not yet given birth to her child; and though the waters had escaped, the os was not well dilated and felt hard and resisting. The patient being feverish and in great distress, I proposed to bleed, but the friends objected, so I sent word to my train to move on, and to detail a horse with a man to take care of him for me. I stayed with them more than half a day. The patient became desperate; every pain was a convulsion followed by coma. When they thought she was going to die they told me to do the best I could for her. I said, you have lost a good deal of very precious time, and if you lose your daughter don't blame my treatment. Well, I bled the patient until I had a wash-basin, which held half a gallon, three parts full. I bled her until she began to look pale around the mouth. She fell asleep after the bleeding and slept probably an hour, when she woke up in regular labor, and the

labor continued regularly for about half an hour when she was safely delivered, and at 2 P. M. I left them to rejoin my train That was what bleeding did in that case.

About six years ago I was called to attend a primipara, a poor wash-woman. I noticed that her feet were very much swollen, and I felt a little concerned about her. She was delivered, however, without convulsions at about twelve or one o'clock at night and got on pretty well until about the same time the next night, when she was seized with very violent convulsions. In her case I resorted to chloral, followed that with chloroform and not succeeding very well, I tried nitrate of amyl as an experiment; but I did not succeed except temporarily. Finding I couldn't succeed in keeping down the convulsions without keeping her under the anæsthetics, I proposed to her friends that I should bleed her. I did so with their consent, bled her copiously and immediately after the bleeding I injected a full dose of morphine hypodermically. She had no more convulsions. She had had from one o'clock in the morning to eight or nine of the same morning, sixteen very violent convulsions. More recently I saw a case of a lady about thirty years of age. She had been confined and a few minutes after her midwife left her, she was seized with a very violent convulsion. That was about twelve o'clock at night also. When I reached her she was just going into one of her convulsions, and I think it was one of the most violent convulsions that I ever saw. This may be partly owing to the fact that the violent shaking of her head caused her false teeth to fly out, and she looked to me as if she were going to shake her head off. She was the wife of a circus man and he away from home, she was among strangers comparatively. I proposed to bleed her as I had had better success from bleeding than from any other remedy that I had used. They said: Do as you think best; we think she must die unless something can be done for her. I bled her although she was a delicate lady. I bled her copiously, but I followed the bleeding with a hypodermic injection of morphine and she had no more convulsions. I mention these cases to show that between the two remedies I have had better success especially with the bleeding. I have had better success with it than any other remedy.

DR. POLLAK.—Where did you inject the morphine?

DR. HURT.—Into the arm.

Dr. Johnston.—How much did you use?

Dr. Hurt.—I suppose I used a quarter of a grain. When I used the morphine, it was original with myself; but I see very recently it has been reported as one of the best remedies for puerperal eclampsia that can be used; and it is necessary to give it in a full dose; one that will put the brakes right down.

Dr. Pollak.—Do you think it would do as well without the bleeding?

Dr. Hurt.—I saw it stated in some journal recently, that the morphine without the venesection is effectual in controlling the convulsions, and I should think in the absence of plethora, it would be sufficient.

Dr. Blount.—Have you had any cases in which you did not bleed?

Dr. Hurt.—No sir; I never had a case in which I didn't bleed; and I never lost a case.

Dr. Hill.—Did I understand it to be a rule with the doctor, that when he sees a case of eclampsia he begins immediately to bleed and inject morphine?

Dr. Hurt.—That has been my rule, though I have not seen a case since the one I last reported which occurred about a year and a half ago in my neighborhood. It is possible that in some cases it would be quite as safe to use the morphine alone; but in all plethoric cases I would abstract blood. I would do so especially where there was little hæmorrhage after the removal of the afterbirth. Most pregnant women are plethoric; that is my opinion, and especially so when we have blood poisoning from inaction of the kidneys. While you weaken your patient, and possibly set her back a little, you get rid of a certain portion of the poisonous material of the blood—urea possibly—which gives rise to the convulsions.

Dr. Johnston.—This question if asked 25 or 40 years ago would have been considered by the faculty as outside all reason and experience of mankind. Before chloroform was brought into use I happened to witness some cases of puerperal convulsions in plethoric patients at the commencementt of their labors, and it was the custom then to bleed freely and give an anodyne, not a hypodermic injection as Dr. Hurt refers to. If the convulsion

continued, still to take more blood; perhaps as much as 60 or 70 ounces; and the question must occur to the gentlemen in this room: Why this phlebotomizing? We did not then have the means that we have now. We did not then have chloroform; and as the the gentlemen know, bleeding to syncope is one of the most powerful remedies known to the profession to relax muscular contraction. The reflex irritation from the womb to the sympathetic nerve brings about a contraction of the muscles and forces the blood to the three centers, the brain, the lungs and the abdomen. If you bleed freely, the quantity of blood in the brain is reduced. I consider any member of our profession today who is called to a plethoric lady who is suffering from eclampsia and would not bleed her ad libitum, should be held accountable for malpractice and I think the profession will sustain me in my strong assertion and upon physiological laws. In these puerperal convulsions, if you watch them, you find that the brain is engorged with venous blood; you find that the blood is not returning to the heart and arteries as rapidly as usual and therefore an amount of hydrocarbon is retained in the blood, poisononing the nerve centers; therefore, it is necessary to relieve this quantity of blood in this patient, before you use the chloroform. Chloroform puts the patient in a high state of intoxication, destroys sensation: and to use this remedy in a plethoric patient, with the brain gorged with blood, will be a hazardous practice. This practice of giving hypodermic injections has been recommended in *Munde's Obstetric Journal*. Now I contend that that is a hazardous practice, because your patient is plethoric and you may produce apoplexy of the brain and lose the patient if you completely narcotize her.

DR. WESSELER.—The first remarks that I made in this society were, I believe, to relate a case very much similar to the first case Dr. Hurt reported. And I think that those are the cases that especially require bleeding. They ought to be bled to relieve the pressure and relieve the brain. We ought not to narcotize with narcotics or chloroform. I think that bleeding is the proper remedy to relieve the pressure.

DR. SCOTT.—This question, shall we bleed in puerperal convulsions? would bring us back to the question, shall be bleed an anæmic patient? There are certain forms of puerperal convulsions in which we are justified in bleeding, and there are other

forms in which we would not be justified in bleeding. There are three forms of puerperal convulsions: the plethoric, the hysterical and the apoplectic. In the plethoric cases the bromide of potassium and chloral answer a very good purpose; in the hysterical cases I would give anæsthetics; and in the apoplectic we would bleed. That is the rule which I think should govern these cases. I don't think we should bleed simply because it is puerperal convulsions.

Dr. Johnston.—The question asked was whether we should bleed a plethoric patient?

Dr. Green.—I think that venesection in puerperal convulsions does good sometimes; when you have a plethoric woman, a strong woman of full habit, it sometimes acts like a charm. But I don't at all agree with Dr. Johnston, that a man who doesn't bleed a woman who has puerperal convulsions should be tried for malpractice. We may have just as good results from the use of chloroform, as we can by bleeding. If we use chloroform we should keep our patient under the influence of the anæsthetic; keep on with the chlorform so that not a single muscle moves, we can get along in a good many cases; in fact in the majority of cases, without venesection. If we bleed a patient it will not take long before we will have the same quantum as before. The fluid is taken up and the fluid circulating in the vessels is replaced as it was before and the pressure will soon be there again. But is it merely pressure that causes the disease? We have cases of puerperal convulsions where there is actually an anæmic condition. Where is the pressure here? We may have puerperal convulsions taking place in plethoric women or anæmic women; it isn't the pressure alone that causes the trouble.

Dr. Hurt.—We must of course use discretion in bleeding in puerperal eclampsia. One of my criteria would be to estimate the quantity of blood that has been lost in the birth. If the convulsions precede the birth, it is usually safe to bleed. If the patient is not very plethoric, not of very full habit and has lost considerable blood during the labor, I really would be afraid to bleed. We know that most animals that are decapitated, or that die absolutely from loss of blood, die in convulsions. So it would not do to bleed indiscriminately. In cases of threatened convul- we might use chloroform, chloral, the bromides and so on; but among the sedatives I am satisfied that the most potent of all is

morphine, and I would prefer using it hypodermically for the reason that it is prompt.

DR. JOHNSTON.—I would like to say a few more words. Now the question asked was: shall we bleed a plethoric female in puerperal convulsions? and I presumed that it was meant before the child was born. By plethoric patient, I understand we mean one who has an excessive amount of blood in the vessels, this causes a reflex action from the womb to the cerebral centers, thereby producing a contraction of the muscles, and if this contraction continues long enough, the patient must inevitably die.

SATURDAY Feb. 18, 1882.

The Technique of Gastrectomy. By F. J. Lutz, M. D.

MR. PRESIDENT AND GENTLEMEN.—I ought perhaps to offer an apology to you for venturing to occupy your time with the details of an operation, which has as yet, been but very rarely performed; and besides, what I shall have to say, cannot, for obvious reasons, be original; nor is it especially compiled for the present occasion, but is rather, a part of one of a series of lectures which I had the honor of delivering before the Medical Class of the Missouri State University, last month. I have been bold enough to repeat this lecture before you, at the solicitation of a number of the members of this Society, and because the text-books do not as much as make mention of this operation and the current English literature, has failed, so far at least as I am acquainted with it, to give an intelligent account of the various steps in its performance.

The very rapid strides which surgery has made in our day, has necessitated various additions to our vocabulary. Thus, formerly, the term "gastrotomy" was applied to designate Cæsarean section, as well as to describe an incision made into the abdomen for the purpose of removing some internal strangulation or a hernia—laparotomy as we now say—or finally to designate an opening into the stomach for the removal of a foreign body. Now-a-days, this latter procedure is meant when we speak of *gastrotomy*. *Gastrostomy* on the other hand, means the establishment of an artificial fistula into the stomach for the purpose of introducing food, when an obstruction exists in the œsopha-

gus; whilst *gastrectomy* is the term employed to describe the removal of a portion of the stomach.

Much of the success which attends this latter operation depends upon the selection of proper cases, and here the diagnostician must come to the rescue of the surgeon or rather, he must prepare the way for the operator. If a correct diagnosis is made, if the diagnostician can positively say that a certain neoplasm is limited to any particular portion of the stomach, the surgeon's work is very much facilitated and if this diagnosis be made early in the progress of the disease, the patient's chances for recovery are very much increased.

According to the researches of Gussenbauer and Winiwarter, the pylorus is the most frequent site of primary cancer of the stomach, and they have also demonstrated by statistics, that cancer of the pylorus attacks the neighboring organs at a comparatively late stage of the disease. In the 903 cases of gastric cancer which these gentlemen collected, the neoplasm originated 542 times at the pyloric end. In 223 of these, no secondary deposits were found on post-mortem examination; and in 172, no adhesions with neighboring organs had been found.

Nor must the observation made by Rokitansky be forgotten, that cancer of the pylorus rarely extends to the duodenum.

Before entering upon the discussion of the various steps of this operation, it will not be unprofitable to briefly glance at the anatomy of the part involved.

You know how very much the position of the stomach changes, even in the normal condition of affairs, but when diseased and especially when the disease is a new growth and involves the pylorus, the difficulty of locating the pyloric end is infinitely increased. Instances occur in which the carcinomatous pylorus has been dragged down to the symphysis pubis on account of its weight, or again, it has been found immediately above Poupart's ligament on the right side. And it quite frequently occurs that the pylorus is found on either side of, or above or below the umbilicus.

Besides the increased weight, the adhesions which have been formed with the surrounding viscera may also change the position of the pylorus.

The connections of the stomach are of great importance and it will be well for me to mention the *small omentum* or the gas-

tro-hepatic omentum; the large omentum especially the gastro-colic ligament. That part of the peritoneum which forms the hepato-duodenal ligament, must be especially mentioned, because it should not be cut for it serves to hold up the duodenum, it being inserted partly at least into the horizontal portion of the duodenum.

As shown by the accompanying fig. 1. the gastric and the gastro-epiploica sinistra arteries would be cut if the whole stomach were resected. As a rule, the hepatic artery and the gastro-epiploica dextra are cut. The gastro-epiploica-dextra forms as you know a loosely attached wreath around the greater curvature of the stomach and can very easily be separated from it.

We must remember, also, the anatomical fact that the gastro-epiploica dextra is a branch of the gastro-duodenal artery which passes downwardly *behind* the pylorus and then after giving off its gastric branches (of which the largest is the gastro-epiploica dextra) it passes to the duodenum and pancreas as the pancreatico-duodenalis. This gastro-duodenal artery then may very easily be wounded if any adhesions exist between the pylorus and the neighboring viscera.

Of the veins which may become involved, I will only mention the vena gastro-epiploica dextra which empties its contents into the superior mesenterie and the gastric which terminates in the vena portæ.

The important nerves are the anterior gastric plexus, which covers the anterior part of the stomach and which is formed by the anterior or left portion of the vagus. It has numerous connections with the sympathetic system, which are especially supplied by the cœliac plexus. On the posterior surface of the stomach there is the posterior gastric plexus which originates from the abdominal portion of the right vagus nerve.

Along the lesser curvature there are 3–5 lymphatic glands and along the greater, from 4–7.

Nor should we forget to carefully locate the entrance into the duodenum of the ducts which carry the bile and the pancreatic juice. The ductus communis choledochus, the common, excretory duct of the liver and gall bladder, opens as you know in common with the pancreatic duct upon the summit of a papilla situated at the inner side of the descending portion of the duodenum, a little above its middle.

You will also remember that the upper smaller lobe of the head of the pancreas is attached to the left and posterior surface of the vertical portion of the duodenum, and is, therefore, not endangered during the operation.

When it is intended to practice resection of the stomach, the patient should be anæsthetized and a thorough examination be made in order to thoroughly appreciate the volume, mobility and adhesions of the tumor. For several days preceding the operation, nutritive enemata should be administered, and for several days and about two hours before the operation, the stomach should be carefully washed out with lukewarm antiseptic water.

Let us now pass through the steps of the operation:

In the first place, we should guard against infection by using every possible antiseptic precaution.

Site of Incision.—Where the incision of the abdominal walls should be made is not yet definitely settled. Péan prefers to make it in the linea alba; Rydygier chooses an incision parallel to the linea alba and a little to the right, whilst Billroth makes a transverse incision where the tumor is most prominent. The reasons which he assigns for his incision are these:

1. The diseased portion of the stomach is at once brought into view.

2. It allows the operator to oversee the entire field of the operation, viz., the pylorus and the duodenum.

3. Prolapse of the intestines is less likely to occur, and finally,

4. If the cancerous growths should be adherent to the abdominal wall, the involved portion of the peritoneum and abdominal wall can at once be excised.

Contra-indications.—After the peritoneum is divided, the surgeon surveys the field and dependent upon the fact, whether other viscera are involved or not, he proceeds, or abandons the operation by sewing up the exploratory incision. If the pancreas, the descending portion of the duodenum or the liver is involved, it is not justifiable to proceed. But if the transverse colon shares in the disease, to resect it and Billroth advises to complete the operation; but this involvement adds a grave and difficult complication. If it is found, after a careful examination, that the

tumor can be removed, it should be drawn as far as possible into the wound and we can then determine where the incisions should be made and to what extent we must free the neoplasm from its normal and pathological adhesions.

ISOLATION OF TUMOR.—We now proceed to completely isolate the pylorus and the adjoining portion of the stomach and duodenum. This may prove the most difficult part of the operation. You begin by loosening the large omentum from the great curvature of the stomach and thereby sever the peritoneal connection of the stomach with the transverse colon. Before cutting any blood-vessels a distal and proximal ligature should be applied. It is found that in certain parts the omentum can be removed without bleeding.

The same process is then gone through with at the small omentum.

Infiltrated glands should be removed wherever met.

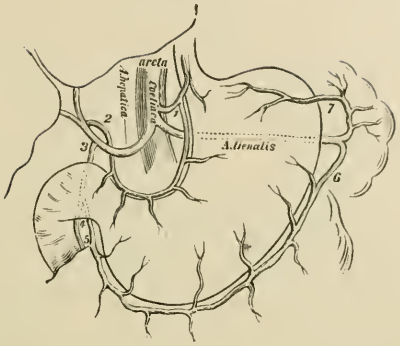
After the pylorus has been thus freed of all its connections, the most difficult and disagreeable part of the operation is finished.

To guard against the entrance of any of the gastric ingesta into the peritoneal cavity, a large soft sponge or a napkin, thoroughly disinfected, is placed under the stomach, which should now be drawn completely out of the abdominal cavity, so that all the subsequent manipulations can be done extra-peritoneally.

EXCISION OF TUMOR.—The next step is the excision of the diseased mass. The surgeon should by this time have determined in his own mind, what shape the stomach is to have after the excision of the pylorus. If we intend to attach the duodenum to that part of the stomach next to the lesser curvature, as shown in figure 2, and you will best proceed in the manner shown by figures 3 and 4.

Entrust the tumor, which has been firmly caught by a pair of strong forceps, to an assistant and then with a pair of scissors begin your incision on the side of the tumor nearest the stomach, at a proper distance from it and cut through both walls of the stomach at once. After each stroke of the scissors seize every spurting vessel and when the hæmorrhage is checked, continue the incision. If the stomach is not completely empty, its contents will begin to flow out and should be at once caught by

Fig. 1.



1. Gastric Artery.
2. Pyloric Artery.
3. Gastro-Duodenal Artery.
4. Pancreatico-Duodenal Artery.
5. Gastro-Epiploica Dextra Artery.
6. Gastro-Epiploica Sinistra Artery.
7. Gastrica Brevis Artery.

Fig. 2.

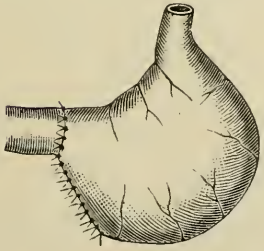


Fig. 3.

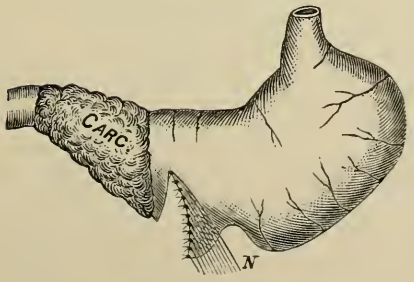


Fig. 4.

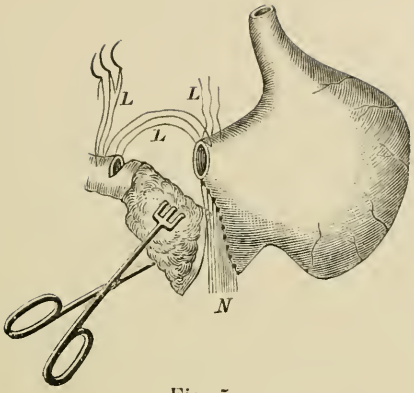


Fig. 5.

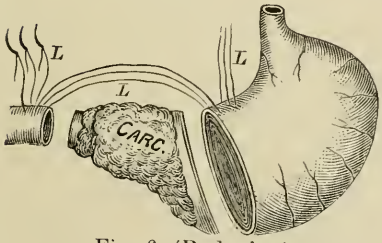


Fig. 6. (Rydygier.)

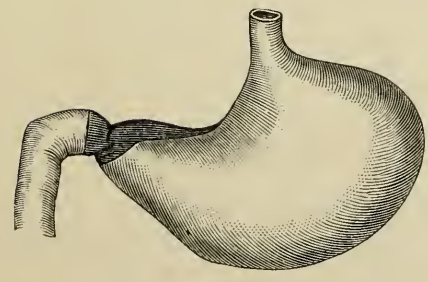
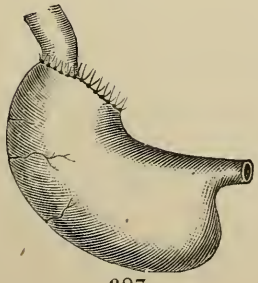


Fig. 7.



sponges and the stomach itself should be thoroughly swabbed out.

All the blood-vessels should now be ligatured with carbolized silk and the opening in the stomach diminished by the insertion of sutures in such a manner as to oppose the serous surfaces. As shown in figures 3 and 4 *n*., the sutures should be allowed to remain, for they will form a valuable handle whereby to hold the stomach.

After the opening of the stomach has been thus diminished to the size as shown in fig. 4, *a*, the remaining portion of the stomach is divided and the bleeding vessels secured.

The carcinomatous pylorus is now attached only to the duodenum. To prevent the duodenum from slipping back after the pylorus is cut off, it should be transfixed by a strong silk ligature as shown in fig. 4, *l*.

The pylorus is then separated from the duodenum and all bleeding vessels tied and the duodenal opening should be closed by means of a well-fitting carbolized sponge.

Insertion of Duodenum into Stomach.—The insertion of the duodenum into the diminished opening of the stomach is the next thing in order. You begin your sutures on the posterior surface of the stomach and duodenum and as has been found to be very expedient, you insert the sutures from the *inner* surface.

In the making of this suture you invert the order which I spoke of to you, when discussing the different kinds of intestinal sutures. You insert your needle between the mucous and muscular layers of the stomach, pass through the muscular and serous coat, and on the opposite side enter it into the serous coat of the duodenum, pass it through the muscular layer and come out at the edge of the duodenal wound between the muscular and mucous coats. These sutures are made from the inner surface until the opening does not allow on account of its size to continue them (when the anterior part of the wound is united by the ordinary Lambert suture.). You see the mucous layer is not included in the suture, its edges will prolapse a little and thus close the wound completely. Where they do not do this, a few ligatures may be inserted.

It is of course apparent that all the knots of these ligatures are on the internal surface.

Dilatation of Stomach.—This is the most simple form of

reuniting the duodenum with the stomach. As seen in figure 7 it may also be inserted into the greater curvature or into the centre. In case the former is practiced, the incision should begin at the smaller curvature.

To prevent the formation of a pouch, which is most likely to occur at the greater curvature it seems advisable to insert the duodenum at this place, as a rule.

After making a thorough toilette of the peritoneum, every suture should again be examined and the whole should be returned into the abdominal cavity, and the abdominal wound is then closed and dressed antiseptically.

In the after-treatment the most important point is the nourishment of the patient. Ice—nutritious enemata. Billroth gave to the first patient he operated upon, on the second day a tablespoonful of cold soured milk every hour, which was well borne and the quantity was gradually increased.

NOTE.—As stated in the introduction to the above paper, originality is not claimed for it, but it is only a compilation from such sources on this subject as have been accessible. And being a lecture delivered before medical students, reference to the various authors was impracticable and therefore does not occur in the body of the essay. The illustrations are from Bock's Atlas, Wölfler and Rydygier.

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DISCUSSION.

Dr. Johnston.—Now the question comes up is this a justifiable operation? It seems to me it is intended more to show the skill of the surgeon than for any beneficial result. Bilroth has operated four times. In three of these, the patient died within four months, and the other has not been heard from. Now as cancer is a constitutional disease and will return within twelve or fourteen months, is the surgeon justified in inflicting this misery on the patient? I can see no justification for it; and I think this Bilroth is the boldest surgeon of modern or ancient times.

Dr. Hodgen.—I should be free of adverse criticism of the gentleman growing out of experience in connection with the operation, but I have two points to suggest in connection with the operation. The Doctor described very carefully the manner of opening the stomach and it occured to me that when the stomach was opened first on the gastric side, instead of cutting entirely through, it would be well to make a small opening, insert a tube and draw off the contents of the stomach, swabbing out the contents. If this is done the probabilities of regurgitation are very much lessened. Another point is in connection with the application of the ligatures in finally closing the operation. The first part of the operation is done from the mucous membrane side as the Doctor very clearly showed, the last part, hardly as well, but also from the mucous surface except the last half dozen sutures which were left long. The needle is introduced from the free mucous side and carrying it back from the mucous surface leaving the ends outside long. These last sutures may be tied with the knots inside the stomach quite as well as the sutures in the beginning are tied with the knots inside the stomach, the last one being the only one which offers any difficulty at all to returning the knot to the mucous side, and that could be done readily by passing the free ends of the last ligature through the opening between the sutures. It occurred to me that this suggestion might be worth mentioning as there is a possibility of some one attempting this operation in this city. The question as to the propriety of the operation cannot be determined now. We cannot now say what the result will be. Abdominal surgery has made such strides within the last fifteen or twenty years that it is impossible to know that this may not

be a standard operation in coming time when we make the diagnosis early enough, when we locate definitely the site of the disease, when antiseptic surgery is carried so far that the abdomenal cavity can be opened as freely almost as any part of the body, we are justified in the conclusion that it is probable that this operation will one day be a standard operation. Up to the time of Spencer Wells the mortality in ovariotomy amounted to 75 per cent, now it amouts to about 20 per cent.

DR. JOHNSTON.—Keith reports his as two and a half per cent.

DR. HODGEN.—That is in a given number of cases. If I had reported my first case I would have had 100 per cent: If I report my 23 cases it is a good deal less. But I saw a case of cancer of the pylorus the other day in which the tumor moved very freely through a space of four inches. I could feel it very definitely through the abdominal wall, and determine its size. The cardiac extremity seemed to be the fixed point and as it contracted would draw the stomach towards the left side of the abdomen beyond the median line, and then return to the opposite side of the median line. Evidently this tumor was quite free; not at all adherent, every part was free and movable; and it seemed to me to be a favorable case for operation. Dr. Johnston, one of these days, will be forced to pass from the doctrine he has held so long, that cancer is necessarily and primarily a constitutional disease. It is always a local disease in the beginning and if removed early enough will never return.

DR. JOHNSTON.—If I recollect aright Dr. Lutz stated that the sutures should be inserted into the serous, fibrous membrane and not into the mucous membrane. Bilroth I see by an article in the *American Journal of Medical Sciences* states that they should be passed through the fibrous membrane. Dr. Hodgen suggests that they be put into the mucous membrane, and I dont see why they should not.

DR. HODGEN.—I did say that the final sutures might be introduced from the mucous surface; I didn't say through the mucous membrane, I didn't refer in any way to penetrating the mucous membrane. I said from the mucous surface, from the inside. Dr. Lutz stated that the first sutures which were made on the posterior wall of the stomach were made from the mucous surface, the inside, and that the knots were left inside the stom-

ach on the mucous membrane; but that the last sutures were put in differently, and I suggested that the last sutures, if they were drawn together, until all were in position might be put in the same way, from the mucous surface. That was the suggestion with reference to the sutures. Not that I criticised Bilroth or anybody else. I simply made an additional suggestion, that the operation might be completed as it was begun.

Dr. Dudley.—I want to ask Dr. Hodgen if it is always necessary to close a wound made in the stomach. Say, for instance, after the removal of a foreign body from the healthy stomach, where there is a small wound made. Is it always neccessary to close it with sutures?

Dr. Hodgen.—The doctrine of the profession with reference to wounds of the alimentary canal is that if they are small it may not be neccessary to close them with sutures. It is better they should not be closed, if they are very small. The sutures may make the wound larger.

Dr. Mudd.—I have been interested in the description of this operation, because it shows the possibilities of relief to be obtained by surgery. The question as to whether cancer is a constitutional or local disease is not the primary question, except where the immediate dangers from the operation are very great. Even in this case where it may in time become constitutional, by the extirpation of the cancer we remove the focus of disease, we give very great immediate relief from pain and from the exhausting drains upon the constitution, and the patient almost invariably improves in his general condition. The relief is very much more marked, and more durable than is the relief obtained by narcotics, or from any other therapeutic measures that we resort to outside of operative measures. If the operation does not permanently relieve the patient it is yet justifiable; and the only question that can come up to controvert this measure is the danger to life. If it can be done safely with even temporary relief only, it is a justifiable one. There is no question in my mind that there are cases in which it may be done. It was not long ago that I saw an old woman, too old for operative interference, who had a cancer of the pylorus which was movable, free from the abdominal wall. You could pick it up between your fingers and move it about easily. The diagnosis

was easily made. If this had occurred in a younger person it is possible that permanent relief might have been obtained through an operation. I seriously question whether the operation will be valuable, the dangers are great and permanent relief very uncertain.

DR. BLOUNT.—I would ask what would be the effect upon the stomach when the pyloric valve is removed? Whether there would be any undue tendency for the contents of the stomach to pass before they had undergone a sufficient amount of digestion?

DR. LUTZ.—I can't answer that question. I have seen no statement about it. It seems to me that digestion would be carried on sufficiently for all practical purposes. It is not to be supposed that such a patient could take such food as requires long retention in the alimentary tract; on the contrary his food would be limited to milk, soup, broths, and other things that do not require a great length of time for digestion.

DR. FAIRBROTHER.—I rise simply to state that in my opinion the inquiry raised by Dr. Johnston as to why the mucous membrane should not be involved in the sutures is entirely legitimate. In rents in any other portion involving the mucous membrane, when we apply sutures hoping to obtain union, we implicate the mucous membrane for the very obvious reason, that we wish union to take place on the side of the mucous membrane, and we find that it takes place quicker there than it does in fibrous, serous or integumentary membranes. In securing by the first intention, where the sutures involve the mucous membrane we have the advantage of a much quicker union.

DR. MUDD.—If I understand, this idea of Bilroth for not including the mucous membrane in the sutures, was that the mucous surface, lapping over the sutures would protect the wound from the action of the gastric juice; it was not the injury of the membrane so much as the opening of the way to the juice that is avoided.

DR. JOHNSTON.—I am glad the doctor has made those suggestions. That is what I was trying to bring out. I was also going to refer to the idea suggested by Bilroth of an artificial valve. Where he should make the valve I don't know.

Dr. Hodgen.—May I tell the doctor how it may be made? Now let my shirt sleeve represent the mucous membrane; and coat sleeve represent the fibrous layer. Now if we separate these two layers and cut off the serous layer a little further back, and stitch them together and turn them in we make an admirable valve.

Dr. Newman.—Dr. Johnston has referred to constitutional and local disease and from his remarks I am led to think that there is probably some misapprehension upon that very subject. Now I believe there are certain diseases which are local and others which are constitutional. Now phthisis is a constitutional disease, and it is frequently cured; and yet if the person has a consumptive diathesis and the constitutional cause which produces the disease is not cured, the patient, under similar circumstances, may have a return of the disease. And so with cancerous disease, a person may have a cancerous diathesis, and although the cancer which has developed may be removed, it is likely to return. Of course, it is not certain that it will return, nor is it necessary to say because it does return that the operation is useless. The surgeon removes the cancer, but he doesn't insure the patient that he will never have cancer any more. The probabilities are that the conditions which produced the first cancer may not occur again. A distinguished surgeon of this city removed a cancer from the breast of a lady—he removed the whole breast. That was some ten or twelve years ago, and so far as I know there has been no return of the disease. I see the lady quite frequently and she seems to enjoy perfect health; yet she has inherited a cancerous diathesis, and she may have a cancer somewhere else, just as a consumptive patient who has been cured of the phthisis may, under favorable circumstances, have a return of the disease; but that is no evidence that the disease is incurable.

Dr. Lutz.—I don't want to say anything. But the detailing of this operation at the pyloric end of the stomach suggests the question, why might not this operation be performed for ulceration of the stomach. The operation for cancer involving the pylorus is a much more formidable operation then the same the operation for ulceration of the stomach. Of course, the danger of the operation depends upon the site of the ulcer. If on the anterior part of the stomach I see no reason why the operation

should not be performed, and with perhaps better success than the attempt to remove the malignant neoplasm at the cardiac angle of the stomach. I think I have seen in the dead-house a case of ulceration of the stomach that could have been operated upon. So far as this operation upon the pylorus is concerned I think I have seen a post-mortem of a case in which the operation could and should have been performed. I remember at one time of having in the hospital two cases of stomach disease, one being a young man twenty-eight years of age, and the other an old man of fifty-three. The young man presented a papillomatous growth, near the pyloric portion of the stomach, about the size of a silver dollar. Both of them died. I have no doubt that they were both just such cases as would indicate this operation.

SATURDAY, FEB. 25, 1882.

A Fish bone lodged at the Root of the Tongue, closing the Glottis.

DR. PORTER.—As the lecturer of the evening is not here as yet, I think I can start a narration of cases, by narrating one that came under my notice, and which was very interesting to me. A gentleman, while eating a fish, a croppie perhaps, a fishbone became entangled in the pharynx.

When I saw him, however, he was breathing with a good deal of difficulty, and had little rest except when he held himself erect, and the tongue protruding. I didn't know how to account for it until I made an examination, when I found that the fish bone had become fixed, as it were, between the back of the tongue and the upper part of the epiglottis, so that when he put the tongue in, it made swallowing difficult, and pushed the epiglottis down, and inspiration would be stopped; when his tongue was out, this would almost entirely cease, he was almost free from dyspnœa. The bone could be seen very plainly when the tongue was pulled away. It occupied a posterior position almost horrizontal, and was attached to the back of the epiglottis. It had pierced the epiglottis apparently to the depth of the thickness of the epiglottis. It had also become entangled in the base of the tongue. I had to break the bone in order to pull it out, taking it out in sections. The mere fact that it was a foreign body in the lower pharynx, is nothing unusual; we meet this frequently; but the

rather peculiar phenomenon of the position of the tongue, was interesting to me. There have been comparatively, recently, some curious cases of malposition of the epiglottis reported. There has been one article written upon a case in which the epiglottis became entangled in the arytenoid cartilage; the tongue pressed backward and downward and closed the glottis. This was the first case that I have seen in which the pressure on the epiglottis interfered with the normal position of the organ.

Remarks on the Management of the Laryngeal and Cardiac Crises of Locomotor Ataxia.

Dr. Hughes.—The most distressing of the many distressing symptoms of this intractable malady are connected with the parts that are supplied by the pneumogastric, the spinal accessory, and glossopharyngeal nerves. The lightning pains are not at all comparable to the distressing dyspnœa and apnœa that attack these patients at times in the progress of the malady, and impress them with the imminency of dissolution I suppose that each individual medical man has encountered in the course of his life, but a limited number of these cases. I have not encountered many myself, but those which have fallen under my observation have been to me a source of more solicitude for the comfort and relief of the patient than the symptomatic expressions connected with any of the nervous diseases with which I am acquainted. Because, it must be borne in mind, that in these crises consciousness is intact, the intelligence is unimpaired—the patent is an intelligent and conscious witness of his or her distress, and the mind is filled with those overwhelming sensations that crowd upon the sensorium at a time when death, with each inspiration even, seems so iminent. The immediate occasion of these remarks was the recent death of one of my ataxic patients—a very estimable lady sent from Chester, Ill., and who came to me with the expectation of getting relief; and when a patient comes with the expectation of getting relief, and you find yourself unable to give it, the true physician feels pretty much like the man of many successful military encounters, who is chagrined and mortified in the face of the foe that he cannot conquer. There have not been a great many post-mortem examinations made upon patients who have died in a cardiac or laryngeal crisis; but there have been a few. In the *Revue de Médicine*, for July, 1881

——— described eighteen cases which had fallen under his observation, in which the crises occurred and in which he had an opportunity of making a post-mortem examination. In two cases he found atrophy of the vagus and accessory roots, and of the posterior pyramids, besides the usual typical changes in the cord at other places. There can be no doubt, I suppose, about the morbid central condition which gives rise to these distressing symptoms which occur in the downward progress of this intractable malady; and it is a knowledge of that fact which makes the management of them so difficult to encompass. There is no reflex irritation here, there is no local, peripheral source of the difficulty within the reach of surgery, to be removed. If there were, the resources of our art would make these crises less formidable. The gastric crises are insignificant as compared with the difficulties of deglutition, the alteration and loss of voice, and the distressing dyspnœa. The gastric symptoms as we all know, will often present themselves for a long time in the course of the malady without producing any very great distress; but when the disease attacks, in ever so slight a degree, the origin of the vagus nerve, or the spinal accessory nerve, then is the time when the trouble begins which you can only palliate but never cure, and you cannot prevent. The ophthalmoscopic examinations which have been made in these cases, have revealed no lesion. The symptoms are simply the local sensations of distress which are the manifestations of the central trouble in the cord.

Now if an individual has a case of laryngeal spasm from some other source, it is very easy to administer chloroform, or chloral by enema and overcome the spasm upon the same principle that spasmodic contractions are overcome in any other affection; but when you come to employ an agency like chloral hydrate or chloroform, for the amelioration of a symptom which is due to a central disorganization, a central change, a sclerosed or an atrophied condition in the vicinity of the pyramids, in the medulla, the question will come up in the mind of an experienced therapeutist: How much of the agent will the patient tolerate? How much of the normal conducting medium remains that will act responsive to the therapeutic impression that you may wish to employ? If it were a central irritation merely, the solution of the therpeutic problem were an easy one indeed. If our battery

at hand and we undertake to apply the constant galvanic current is from the centre to the periphery, the question that comes up in the mind is: How much of the normal nerve channel remains, and to what extent can we supplement the nerve force present? If we apply our battery, we discover that our patient is not long in becoming exhausted, and the remedy becomes itself a source of aggravation to the already aggravated condition of the patient. If I had not tried these agencies and realized from their practical application, their unsatisfactory results, I should not make these statements. If we insert strychnia under the skin, and undertake to goad the paralyzed nerves at their source, and to add to the conductile power we but aggravate the difficulty that we wish to relieve. It is a matter of practical demonstration and we generally try these things before we discover the error we make in our judgment. If we administer morphine hopodermically, we get no better results. We dare not, in certain stages, give morphine to such an extent as to produce sleep, else we may return and find that our patient has passed into the sleep that knows no waking. I am not sure but what I have seen one of my own patients whose life was terminated by the most cautiously induced sleep. I had seen this patient pass six nights without sleep, and at last determined to give morphine hypodermically. On returning, I found my services were no longer required. Then what are we to do in these cases? We cannot allay this distress completely. We cannot send the patient completely off to sleep by the administration of heroic doses, because heroic doses of hypnotics are contraindicated. I presume no other form of spasm could be mentioned in which a full enema of hydrate of chloral, or the free administration of chloroform would be contra-indicated; and yet, in cardiac and laryngeal crises of ataxia, the physician acts wisest who tranquilizes his patient by other means within the reach of the therapeutist; and induces that kind of sleep which is known rather as natural than as artificial. It is a singular thing that these crises are not persistent; it is a singular thing that a patient who is troubled almost constantly with unequal pupils, who has the lightning pains continuously; in the earlier period of the malady they may be continuous, where the knee phenomenon exists. But then this fact is not more singular than the other fact that the symptoms are sometimes all intermitted; as

I have seen in one case nearly all the symptoms intermit and disappear for nearly three months, in a case of some years' standing. Well now what are we to do in a case of laryngeal suffocation, of laryngeal dyspnœa amounting to apnœa at times? Possibly some of the gentlemen may have found some unfailing remedy, but if there are remedies for this purpose they have not fallen under my observation; and if I had known that there were any remedies for this distressing condition, these remarks would not be made to-night. But it has occurred to me that by calling the attention of the profession to these laryngeal conditions, and to the facts in regard to the difficulty of administering anæsthetics and hypnotics, that some other method might be found which is more beneficial. In my own experience I have tried electricity, I have tried strychnia, I have tried morphia, I have tried chloral, I have tried chloroform, I have tried hyoscia-min and every known remedy that may be safely administered hypodermically. Perhaps I have not been bold enough in the four or five cases which I have encountered, to effect beneficial results; but I have been bold enough to satisfy myself that the ordinary methods of relieving laryngeal spasm, will not do in these cases. In some of these cases the pulse has gone up to 132 in a minute. Where the cardiac symptom is prominent, I have never found anything that gave any satisfaction except hot baths and galvanism applied to the soles of the feet, and that, seemed to afford temporary, limited relief. Probably as Charcot, and as Vulpian and other physiologists have demonstrated through the irritation passing along the sciatic nerve, producing increasing circulation and perhaps reinvigorating for the time being what little nucleus of the defective nerves still remains.

DR. RUMBOLD.—I would ask Dr. Hughes how he applied the galvanic current; one pole to each foot?

DR. HUGHES.—Yes, sir.

DR. GREEN.—Do I understand Dr. Hughes as using the word dyspnœa as meaning the same as apnœa?

DR. HUGHES.—I mean by dyspnœa, difficult breathing, from its Greek origin; apnœa is absolute failure to breathe.

DR. GREEN.—Very well, but there is a state of the system in which, the respiratory movements are at perfect rest because there is no necessity for respiration. What do you call that

state of the system where no respiratory movements take place, because of there being enough oxygen in the system? It is a physiological state at a certain period of life. This state of system takes place when the center of respiration which is located in the medulla oblongata, is not irritated, when there is no stimulation there, no respiratory action results; just as any other nerve has to be stimulated before action takes place, so it is here. The normal excitant or irritant of the center of respiration is the normal amount of oxygen and carbonic acid in the blood that circulates through the medulla oblongata. If the amount of oxygen and carbonic acid in the blood is of the normal state, the individual breathes easily and sweetly, hardly knowing that he is breathing. But as soon as this normal mixture is disturbed, if there is more carbonic acid in the blood than in the normal state, there is too much stimulation of the respiratory center and quick, hurried movements of the chest, and deep respiration take place; that is what we call dyspnœa—respiring with difficulty. Then again, if there is too much oxygen in the blood, which goes to the respiratory center, there is no respiration. A perfect rest of respiratory motion takes place; and why? Because there is no need of it. That is the case with the fœtus in utero. It has plenty of oxygen, and the carbonized blood flows; for this reason it has no need of respiration. Prof. J. Rosenthal has been making experiments on animals, and he found that when there was a sufficient amount of oxygen in the blood, no respiration took place at all; but so soon as he ceased to pump in the oxygen, of course, respiration again took place. That condition of the system, where there was no respiratory effort at all, Prof. Rosenthal named apnœa. Some of you may say, we don't agree with him as regards the term. But you have no other term for it. I have never seen in English literature, another term for that condition of the system. If the center of respiration is over-excited by too much carbonic acid, asphyxia takes place, there is a paresis of the respiratory centers.

Dr. Dean.—If by respiration we always mean the exchange of the gases of the blood through the lungs, the doctor's definition would be right; but there is a respiration that goes on without any action of the lungs whatever.

Dr. Green.—By respiration I mean the respiratory movement.

DR. DEAN.—We do not call the change which is carried on in the fœtus in utero apnœa; we mean by apnœa a cessation of respiration through the lung.

DR. GREEN.—Apnœa means I do not breathe, or that the respiratory movements are at perfect rest. The admission of atmospheric air and the elimination of carbonic acid is a mere physical act, it is the result of creating a vacuum, or tending to create it, but the creation of a vacuum is the result of respiratory movements, which is a vital act. Apnœa, signifies accordingly, the entire want of respiratory movements, it is so understood in all the German works on physiology, and I think it is perfectly correct. We must have a term to express this condition and I think there is no better term than apnœa. That there is such a state no one will deny. We have seen a fœtus born which has already respired. Respiration sometimes takes place in utero. For instance, when hard labor is continued a long time, and carbonic acid in the fœtus is increased and the amount of oxygen diminished, the centre of respiration is stimulated, respiratory movements take place and as there is no atmospheric air to inhale, aspiration of the liquor amnii takes place. But this is not always the case; and why? Because it is proved that when a nerve is slightly and gradually over-excited, that nerve becomes dead. If the mother has pains for a very long time and no exchange of the blood takes place, the fœtus will die without any respiratory movements taking place.

When dyspnœa is continued for a long time asphyxia will take place; and if asphyxia lasts any great length of time paralysis takes place. The cause of the dyspnea is too much excitement; the individual tries to get all the accessible muscles of respiration into action and if this lasts for some time a sub-paralytic state takes place, but no paralysis, yet. He is not dead, however, he can be brought to life; but if this state of asphyxia continues for a long time, paralysis will take place and then life is extinct.

DR. JOHNSTON.—If I understand Dr. Hughes, he stated that a case had been sent to him from Chester, who was suffering from pharyngeal and cardiac spasms. Now what is this dependent upon? Is it an insufficient oxydation of the blood that has brought about this pathological condition? Surely the atmosphere of Chester is the same as that of St. Louis. The logical

line of thought that occurred to me while listening to the remarks of Dr. Hughes led to the inquiry, to what are we to ascribe this laryngeal spasm? It might occur from an active congestion. There must be either a functional or anatomical lesion at the origin of these nerves. If you have disease of these nerves, the lungs do not respond to the stimulation of the air, and you have difficult respiration; but if you have a perfectly healthy condition of the origin of these nerves, you have no laryngeal difficulty unless you have a hyperæmia, an excessive congestion of the various membranes and tissues connected with the larynx and pharynx the result of paralysis of the vasa vasorum, of the capillary system and the extremity of the nerves. But this case that Dr. Hughes has presented to-night resulted from some brain trouble. Now chloroform in such a case is contra-indicated because the blood is already excessively charged with carbonic acid, and if we give chloroform we increase the asphyxia. So also, if we give chloral or morphine we do the same thing. The next remedy would be nitrite of amyl. But an organic lesion at the origin of these nerves can only be cured by nutrition. Unless the physician can make a new organism he cannot cure his patient.

Dr. Hughes.—I want to refer to Dr. Green's question. There may be a pathological as well as a physiological dyspnœa and apnœa. We may have apnœa and dyspnœa from other causes than those which fall under the eye of the physiological experimenter. Now I suppose that it is not necessary to deny Dr. Green's explanation of the physiological cause of its extremest degree which has, I think, so justly been termed apnœa. If in the region of central nerve space between, say, the beginning of the corpora restiforma, the corpora olivaria of the medulla oblongata, and extending down to the sixth cervical vertebræ, within which region you have the origins of the pneumogastric, spinal accessory, and hypoglossal nerves, you have a morbid condition compromising the integrity of the nerves originating there, which preside over the function of respiration, and the movements of the heart, and which contract the larynx and pharynx; you may have a pathological condition which makes dyspnœa possible and which makes apnœa a legitimate result without undertakng a physiological explanation referable to blood changes, and you may have it whether the blood is sufficiently aërated or not; on the contrary, we may

have it when the blood is sufficiently aërated because of the trouble at the point of the origin of the nerves. Dr. Green is a well informed man and I am surprised that he should invoke a physiological explanation for a pathological effect. It is plain Mr. President, that if at the origin in the course of afferent nerves you have an intercepted communication from the peripheral source of irritation, as in the case of the pneumogastric, or spinal accessory nerves, you may have a pathological condition existing in the lung, and yet you cannot have the proper physiological impression made at the center, and if you have at the origin of these nerves a pathological status, how can you expect them to give forth a physiological response even to normal excitation? You would not expect anything but a jerking respiration and spasm of the larynx when you have atrophy or when you have selerosis of the medulla oblongata implicating the origin of the nerves which supply the parts below.

DR. JOHNSTON.—I would like to ask in what position this lady held her head?

DR. HUGHES.—She never seemed comfortable in any one position, but had to be moved about every hour. She was more comfortable when the head was lying on the right side generally. The head was not thrown back. The head was thrown to the right side generally, this was owing to the spasmodic contraction of the sterno-cleido-mastoid muscle.

DR. PORTER.—The literature on this subject is very meagre. Charcot was the first to speak of laryngeal crisis in 1879. Of course, the prognosis is unfavorable. If there is a central origin of the disease, and such disease cannot be cured, it is almost contradictory to speak of permanent relief of the symptoms. The laryngeal conditions are necessarily varied. I do not speak from large experience, I have seen one or two, possibly three, but these cases were not marked ones. The severity of the symptoms depend altogether upon the amount of central involvement. If the nucleus of one of the laryngeal nerves is affected or destroyed, there would then most likely be a paralysis of the muscles affected and finally of the cord upon that side. Sometimes, also, the abductor and adductor muscles are affected. If the abductor muscles are affected of course there is aphonia, more or less; if the adductor muscles are affected on one side only, or on both sides, as sometimes happens, there will be

dyspnœa. I think that any condition that affects the origin of any of the motor supplies will produce this laryngeal crisis. The motor supplies of the laryngeal nerve are many and so far down as the sixth cervical vertebra, and there may be several conditions producing laryngeal crisis. So far as the relief of the symptoms is concerned, we can only accomplish this temporarily. There may be of course, intercurrent spasms, but so far as our remedies are concerned, so far as we know, there is little that can be done to relieve the patient. Some one writing upon this subject more recently has suggested tracheotomy. Tracheotomy would only give temporary relief, and more than that the laryngeal symptoms are seldom as well marked as the cardiac symptoms; and certainly tracheotomy would do no good so far as the circulation is concerned. I do not think that we have any means of value in the treatment of these cases. It would probably be well if the symptoms were better formulated than they have been. I am not sure but what Mackenzie speaks as definitely on this subject as any other authority, but he has little to say about it.

Dr. Heidemann.—The subject this evening has been very interesting to me, as I am fortunate, or unfortunate enough to have a case of this kind under my care at the hospital. I have noticed the dyspnœa, but my attention has never been called to the larynx in this matter. I came to-night with the expectation of learning something of the treatment. I have been treating him for pain in the back part of the thighs for which I gave him iodide of potassium. This seemed to relieve him at the time. When he was troubled with dyspnœa I gave him ergot and found that it relieved the symptom. His appetite is generally good and he has no trouble with his mind. In his earlier days he was unfortunate enough to have syphilis. That was about twenty years ago. He was attacked with a paralytic stroke while in Philadelphia which was then pronounced locomoter ataxia. He never got entirely over it. The symptoms sometimes come on every two or three days. I first noticed the difficulty of breathing two months ago. I am very glad that this matter has come up.

Dr. Green.—Dr. Hughes says there is a physiological and a pathological apnœa.

Dr. Hughes.—I don't wish to be understood as saying that

apnœa is a proper term to use in designating a physiological condition. There may be such a thing possible as a kind of apnœa by common consent that could be called physiological apnœa, that is, a momentary suspension of breathing.

DR. GREEN.—If the doctor doesn't admit that there is a physiological apnœa, what does he call that state of the fœtus in utero. You may say that the oxydation of the blood serves the place of respiration, but we are speaking of the respiratory movements, and I said, where the respiratory movements are at rest, not because the patient cannot breathe, but because he has no need of respiration. You can make experiments upon animals, and if you give them enough oxygen, all the respiratory movements will cease. The carbonic acid must be eliminated during the same time of course. But so soon as you cease to pump in the oxygen, the animal comes to and the respiratory movements begin again. It will be actual respiration, but if there be some difficulty, it will be dyspnœa. Then another thing, we know very well, I had a case once myself, in which a child was born in the membranes, the lady was affected with small-pox, the child respired and the liquor amnii was aspired. So soon as the exchange of oxygen and carbonic acid ceased the respiratory movements took place, and, as there was no air to be breathed, aspiration of the amnionic fluid occurred. The doctor says that by dyspnœa, we mean difficult breathing; that dyspnœa, when it lasts a long time, prevents the person breathing at all. Now sir, there may be a case in which a pathological condition exists in a person suffering with dyspnœa, labored respiration, so that he may cease to respire all at once, and that case would more frequently be called asphyxia. Asphyxia is the right term for this pathological apnœa. The state of dyspnœa does not go into apnœa, but into asphyxia.

DR. MULHALL.—I don't want to occupy much of Dr. Hughes' time, but I think he has assumed that we know too much about this cardiac and laryngeal crisis, and I simply rise to ask him when he makes the closing remarks, to give some details, if the time will permit, as to whether dissolution ever comes on during the attack, what are the permanant consequences, and whether he has ever examined the larynx during one, what was the nature of the cardiac involvement, whether it was like cardiac asthma for instance.

Dr. Hughes.—I should like to enter more fully into the subject on another evening, if the society want to be bored. You will observe that I have endeavored to be brief and I have taken it for granted that the members of this society were somewhat acquainted with this subject; and I intentionally omitted many details and specific symptoms which this patient had. The question that Dr. Johnston asked is a pertinent one: Whether the atmospheric condition is not the same in Chester, as it is here. It would havebeen proper for me to have stated that the laryngeal symptoms became prominent in this patient since her arrival in the city. She came to me as a patient suffering with locomotor ataxia. Her laryngeal symptoms were intercurrent. There was cardiac complication also. There was acceleration of the circulation, and increased ganglionic disturbance of the heart. The examination of the heart revealed no organic lesion, no abnormal valvular contractions, nor enlargement. In the progress of these crises which finally terminated her life, she lost her voice. At first it had a peculiar whistle and finally she lost her voice altogether. She could whisper, but could not talk audibly. She did not die as one usually dies from asphyxia. I was not present when she died, but I was told that she died without great suffering. Dr. Stevens will remember the case of Mr. Kennerly who has had laryngeal crises for some fifteen years, at least it is some fifteen years since the man was first attacked with them, but they are very light. You do not have the same intensity of attack in all patients.

Dr. Porter.—I would like to endorse Dr. Mulhall's suggestion, that Dr. Hughes would formulate, as far as he is able, the laryngeal appearances in locomotor ataxia. I would like to know the diagnostic symptoms. So far I believe there are no diagnostic symptoms that we are able to depend upon. The writers on laryngology have not yet taught us much on that subject.

Dr. Hughes.—I think, Mr. Chairman, if there were any laryngeal symptoms of locomotor ataxia, that Dr. Mulhall, Dr. Porter or Dr. Rumbold would be much better able to relate them than I; and inasmuch as I have distinctly stated that the laryngoscopic appearances were few so far as observation had gone, I don't think it devolves upon me to demonstrate laryngoscopic appearances which are not. I do not understand the purport of the question. I have distinctly stated that the laryngoscope reveals nothing, but then why should I be asked to describe what I have not seen, and what nobody else with whom I am familiar has seen; that is, a laryngeal revelation—diagnostic revelation of sclerosis in the medulla oblongata; probably I have been misunderstood.

Periscope.

Article LX.

ANATOMY.

The Optic Tracts and the Visual Centres.—Tartuferi has in the Pathological Laboratory of Turin conducted a series of experimental researches on the optic tract and the visual centres in the cerebral ganglia and cortex cerebri. From a note in the *Italia Medica* (No. 5, 1880) it appears that he has arrived at the following conclusions:—

1. Where the corpus geniculatum externum appears to be smaller it is often dependent upon the sclerosis of the optic tract which extends over it.

2. It is not true, as up to this time has been stated by anatomists, that all the fibres of the corpus geniculatum externum belong to the optic tract. It only forms a small part of its medullary cortex, and passes over it without entering into any intimate connection.

3. The corpus geniculatum externum cannot be considered as belonging to the mesocephalic centres of the apparatus of vision. Assuredly, at least, it has not the important significance which some anatomists would attribute to it.

4. The inferior commisure of Gudden is not, as its discoverer imagines, a simple commisure between the two optic thalami and the two corpora geniculata interna.

5. The greater part of the inferior commissure of Gudden, which is in connection with the two corpora geniculata, and especially with the external one, probably goes to compose the inferior portion of the superficial white and grey layer.

6. There are no fibres of the optic tract on the surface of the optic thalamus.

7. The thalamus is not a visual centre.

8. What is called the inner root of the optic tract going to the thalamus (innere Sehhügel-wurzel of Meynert, or tiefere Wurzel-bundel of Studa) does not belong to the optic tract.

9. The fibres which compose the so-called root of the corpus geniculatum internum (Huguenin) does not belong to the tract, but to the inferior commissure.

It results from these four last conclusions that of the five roots of the optic nerve recently admitted (Huguenin, 1879) there is only one real root which passes over the corpus geniculatum externum without entering into it, and goes to the anterior tubercle of the corpora quadrigemina.

10. The diminution of the punctus occipitalis is due to atrophy, and not, as Gudden says, to a sinking, owing to the diminution of the anterior tubercles of the corpora quadrigemina which lie below it.

11. The point of the occipital lobe in the rabbit constitutes the cortical centre for the apparatus of vision. This has been confirmed by experiments upon monkeys, cats and dogs, as well as by pathological observations on man.—[*Brain.*

PHYSIOLOGY.

THE RELATION OF NERVES TO PIGMENTED CELLS.—The changes in color induced in the skin of certain animals, such as frogs, snakes and the chameleon, by section of the nerves, or by the direct action of light, are due, as is well known, to contractile changes in the pigmented cells of the integument. These phenomena, striking in themselves, have recently assumed a new interest in view of the possible analogy existing between the movements of their processes and those of the pigmented cells of the retina, which dip down between the rods, as described by Ewald and Kühne. Hence the work of Ehrman [1] possesses an interest wider than that attaching to any simple morphological detail in the structure of the frog. E., by treatment of the skin of the back of the green frog with acetic acid and afterward with

1. Ehrman: Ueber Nervenendigungen in den Pigmentzellen der Froschhaut, *Sitzungsb. d. k. Akad. d. Wissensch. Math.-naturw., Cl.*, 3 Abth., lxxxvi, 167.

gold chloride is able to trace with distinctness the termination of cutaneous nerves in the processes of the pigmented cells. The nerves and cell processes either merge insensibly into one another, or show a sharp line of demarcation by the abrupt termination of the pigment deposit. Such a connection between nerves and the chromatophores has already been shown by Leydig to exist in snakes, but has not been demonstrated before in the frog.

Ayres [2] states that he has recently traced a direct connection between nerve fibres from the ciliary nerves and branches of pigmented cells of the choroid, in the human eye.—[*Jour. Mental and Nervous Diseases.*

THE BONE-CONDUCTION OF SOUND.—In the *New York Medical Journal and Obstetrical Review*, for February, 1882, Dr. J. A. Andrews, Assistant Surgeon to the Manhattan Eye and Ear Hospital, gives an account of his investigations in regard to the intermittent perception of sound, as conveyed through the cranial bones—the observations having been mostly clinical, largely with the use of the tuning-fork. In order that an explanation for the phenomenon of intermittent bone-conduction may be understood, he thus formulates the points in differential diagnosis between an affection of the middle ear and one of the labyrinth, as evidenced by examination with the tuning-fork: 1. If a vibrating tuning-fork, c, be placed between the teeth, the hearing power being normal on one side and diminished on the other, and its tone be intensified in the ear of which the hearing power is diminished, the cause is seated in the external or middle ear, and the labyrinth is unaffected. 2. If the hearing power be impaired in both ears, the sound of the tuning fork be heard better in the worse ear, and intensified on closure of the ear of which the hearing power is most impaired, the cause is still located in the middle ear. 3. If under either of the above mentioned conditions, the vibrations of the tuning-fork be not heard better in that ear of which the hearing power is most impaired, even if its meatus be closed with the finger, and middle ear disease as a cause can be excluded, there is an affection of the central apparatus of hearing. If the tone of the tuning-fork be still intensi-

2. Ayres: Contributions to the pathology of sympathetic inflammation, *Arch. of Opthalmology*, vol. x, No. 3, p. 278, note.

fied by closure of the ear of which the hearing power is least impaired, there is disease of the central apparatus on one side only. Should the sound of the tuning-fork not be intensified by closure of either ear, then the disease is on both sides, and has its seat in the labyrinth or in the brain. In the first and second propositions, the increased resonance results from the reflection of the vibration from the cranial bones upon the nerve. In the third proposition the reflection or condensation of the vibrations of the tuning fork upon the nerve when the meatus is closed does not intensify their perception, because the function of the auditory nerve itself and not that of the conducting apparatus is impaired. The peculiarity that in some cases of the middle ear disease the watch is not heard by bone conduction, and in other cases examination with the tuning-fork gives the sign of labyrinth disease—*i. e.*, the tuning-fork being heard by bone-conduction better in the ear which is normal as to hearing power, therefore diminished instead of increased in the ear of which the hearing capacity is impaired—cannot, it seems to him, be explained by assuming an interfering with the conduction through the chain of ossicles. He inclines to the belief, based upon experiments, that this phenomenon is due to increased intra-labyrinthine pressure, brought about in those cases of middle ear disease in which there is an accumulation of fluid in the tympanum or the membrana tympani is much depressed, in the former instance by the fluid in the cavity acting upon the oval or round window, or both, in the latter instance by the plate of the stapes being forced against the membrane in the oval window. In both cases the terminations of the acoustic nerve suffer a mechanical irritation which gives rise on the one hand to subjective noises in the ear, and on the other hand annuls the perception of certain tones. Extreme pressure upon these parts may so interfere with intra-labyrinthine vibrations as to completely obliterate bone conduction for the tuning-fork.

PATHOLOGY.

RINDFLEISH ON TUBERCULOSIS.—After all that has been said and written on this subject, we seem little nearer unity than we were some years ago. Does the reason of this lie in the attempted dissociation of clinical medicine and pathology? The results of such a dissociation are seen in the cognate subject of

tumors where clinical history is at least as important as ultimate histological structure. The pathology of tuberculosis must similarly consist, not merely in a histological examination of its ultimate products, but also in the careful tracing of its clinical history.

Tuberculosis, Prof. Rindfleish believes, (*Virchow's Archiv*, 1881, Band lxxxv, pp. 71–83), is undoubtedly an 'infection-disease', but one for which mankind has, to a certain extent, established a tolerance, and which, therefore, appears in its original character only in the case of a person where this tolerance does not exist. Immunity from the outward manifestations of this latently universal disease depends, according to Professor Rindfleish, on good food and a free blood-formation. These failing, tuberculosis becomes evident, and is then handed down by inheritance. The disease shows itself in a characteristic inflammatory process, under which Professor Rindfleish reckons (1) disseminated miliary tuberculosis, the result of the tubercular poison alone, appearing in the form of miliary and submiliary nodules in most of the organs of the body; (2), the more localized miliary tuberculosis, where, in consequence of some local mechanical irritation, the disease appears only in a single organ (lung, brain, peritoneum); (3), localized miliary tuberculosis, where miliary tubercles are developed in the neighborhood of an inflamed centre, ultimately finding their way into the inflamed tissue itself; and (4), inflammatory processes, especially ulceration of chronic course, with little, or perhaps no, local formation of miliary tubercles, but very generally with tuberculosis of lymphatic glands. These inflammations, Professor Rindfleish points out, occur from causes which, in ordinary circumstances, would scarcely produce a passing congestion. The inflammatory product consists, in the first place, in a slow growing deposition, of white blood cells in a connective tissue of the irritated parts. After a time, changes occur. 1. Part of the cells take an epithelioid character, and are termed tubercle cells, being three to five times as large as white blood-cells. 2. Giant-cells are developed which, however, are not to be regarded as characteristic of tubercle. 3. After the aggregations of epithelial cells have produced certain centers in the new growth, there appears a fine granular albuminous substance, either coagulated lymph, or developing zöoglœa masses, which, either separates or

involves in it the epithelial cells. 4. Lastly comes caseation of the inflammatory products owing to defective nutrition. These various peculiarities of the inflammation appear in the differen. forms of tuberculosis enumerated above.—*London Med. Record*.

DISEASE OF SUPRARENAL CAPSULES WITHOUT BRONZING OF THE SKIN.—Dr. Bedford Fenwick said, before the Pathological Society of London, that the specimens were taken from a patient whose illness began about three months before his admission into the London Hospital. There was no pigmentation, but there were marked anæmia, a very feeble pulse, and other systemic symptoms of Addison's disease; the urea in the urine was diminished, and there was a trace of albumen. Addison's disease was diagnosed from the general symptoms. He died somewhat suddenly, of syncope, apparently. *Post mortem*, there was fatty degeneration of the liver, but beyond this no disease of any of the organs, except enlargement and hardening of the suprarenal capsules. The absence of bronzing was the interesting point in the case. He had summarised the cases recorded before the Society during the last fifteen years. He found that in cases where there was no bronzing, the patients died much more rapidly; he was, therefore, inclined to think that there must be a cause at work which attacked two separate organs, or parts of organs. Then the medullary portion of the suprarenal capsules was regarded by the latest observers as a nervous structure, and he attributed the nervous symptoms of Addison's disease to implication of the medullary portion of the suprarenal capsules. Kölliker taught that the outer part of the suprarenal capsule was a blood-vascular gland. Was the bronzing of the skin due to some chemical change in the blood due to disease of this blood-vascular gland-tissue? In the case he now showed he thought that the medullary structure was far more diseased than the cortical; and this seemed to have been the case in other instances in which bronzing did not occur.

The President said that Dr. Fenwick's communication was evidently the outcome of much study devoted to the subject. Addison had noted that the bronzing might not occur in patients who died early in the course of the disease; he had, however, accounted for the fact by supposing that it would have come on had the patient survived.—[*British Medical Journal*.—[*Gaillard's Jour*.

MEDICINE.

THE INFLUENCE OF METEOROLOGICAL CONDITIONS UPON THE CAUSATION OF CROUPOUS PNEUMONIA.—It is a well established fact that the weather, or, to speak more definitely, certain states in the meteorological condition of the atmosphere, have a marked influence upon some of the organic functions of the human body. That this influence is able to cause disease is maintained by some, admitted by a few more, and denied by most authorities.

For some time past Dr. August Seibert, of New York, has been collecting records of the cases of croupous pneumonia brought to the department for diseases of children in the German Dispensary of New York City, with particular reference to the meteorological conditions under which they have developed. His results, published in the *American Journal of the Medical Sciences* for Jan. 1882, show that in 78 per cent. the origin of the disease coincided with a marked fall of the barometer; in 84 per cent. with a minimum temperature of below 50° F.; in 50 per cent. with northerly winds; and in 33½ per cent. with northwesterly winds; in 67 per cent. the velocity of the wind was 15 miles per hour; and these conditions, which seem to favor the development of pneumonia, were accompanied by a condition of high humidity of the atmosphere. His studies are drawn from 600 cases, and his conclusions that the above conditions favor the causation of pneumonia are worthy of consideration.

CASE OF PUERPERAL INFECTION IN A MAN.—G. Lapponi, in *Rivista Clinica di Bologna 1880*, (*Progrès Médical*) after having analyzed and discussed the different theories which have been advanced concerning puerperal septicæmia, the author adopts the one which is generally the most accepted; that is, an infectious disease produced by the absorption of active septicæmic virus, which enters the organism by the pre-existing lesions of the genital canal; at times the virus is formed in the genital canal in a manner peculiar to itself, then again it is imported directly or indirectly from the air.

The following case, new in the annals of science, serves to support this doctrine of the nature and origin of the infection of puerperal women. The city of Pollenza was, in 1876, the scene of an epidemic of puerperal fever. During the month of December, of twenty lying-in women, twelve were attacked with an

identical form of typhoid septicæmia; and of these, seven died on the eighth day. The epidemic was checked by very energetic prophylactic measures. During its continuance M. Lapponi saw the following case; a man, aged 38 years, married at 28. His wife, a multipara was confined in Feb. 1877, and had rigors followed by fever. Notwithstanding this condition the husband had connection with her, during which he felt a keen pain in the bridle of the prepuce; on the evening of the same day he became attacked with fever, and on the day following he had a chill and pain in the groin. The physician diagnosed erysipelas of the penis. The fever increased, and on the fifth day the thermometer registered 40° Cen. The erysipelas spread to the thigh and scrotum. On the seventh day there was asthenia, delirium and a temperature of 40.8° Cen. On the twelfth day there was gangrene of the scrotum, and bursting of an abscess. The patient died on the seventh day by extension of the trouble to the chest.

After a protracted discussion the author arrives at the following conclusions: 1st, there is no difference between puerperal infection and surgical sepitcæmia. 2nd, puerperal septicæmia has nothing specific about it; its puerperal nature does not carry with it any special character. 3rd, the virus does not penetrate indifferently by all the channels, but only by the solutions of continuity of the genital canal. 4th, the infectious matter may remain in the uterus or vagina without injury to the woman.—[*Obstetric Gazette.*

OUTLINE THERAPEUTICS OF CHRONIC ALCOHOLISM.—Dr. C. H. Hughes, says in the *Alienist and Neurologist*:

The following are some thoroughly tested formulæ which I have for the past ten years, quite successfully used; some reformations among pretty well advanced inebriates having, through their aid, been effected.

When called upon to see a person prostrated from a long debauch, the friends or patient desiring to end it, the formula first employed has usually been as follows:

℞ Kali Brom.....ʒ j
Aq. Distill., qs. ft.....ʒ jv
Aq. Ammon., fort.....ʒ ss
Ext. Quassiæ, fld.....ʒ ss
Tr. Capsici.....ʒ iij
Aq. Menth. pip.....ʒ v
Morph. Sulph.....gr. iij

M. S. Tablespoonful every four or six hours during the first few days, well diluted with pepermint or other aromatic water charged with a drop or two of ol. creosoti, or half a drachm of Cherry Laurel water of the Pharmacopœia.

The morpia in this prescription I withdraw so soon as practicable, and substitute cannabis indica and hyosciamus extracts in minimum doses, if anything more actively narcotic than the bromides seems necessary during the day. The one formula, minus the morphia, with gradual diminution of the ammonia and capsicum, has invariably proven to be sufficient, especially if an occasional two-scruple or half-drachm extra dose of the bromide of ammonium or of sodium is given, largely diluted in not less than eight ounces of water.

Hypnotic doses of chloral at night are always given in plenty of water to avoid burning the lips and throat, insure quick absorption and gastric tranquility. Thirty to forty grains given in this way at the patient's usual time for sleep rarely disappoints. One dose of chloral in twenty-four hours is enough.

A hypodermic injection of hyosciamine may be administered in its stead, but the sleep from it in alcoholism, seems not to be so refreshing as that which follows chloral.

The ammonia and capsicum in the formula may be increased till the toper is satisfied from their taste and effects that he is taking something that supplements alcohol and fills the vacuum in the morbidly hungry stomach and nervous system, provided not over forty drops of aq. ammonia are given as a dose. The morphia may likewise be *temporarily* increased without the patient's knowledge of the name of the drug.

The bowels, of course, must be attended to in the beginning.

Every ingredient of the above formula is to be withdrawn in the course of a week or ten days, except the potassic bromide and the bitter extracts, the others being supplemented by pure water.

The precaution is always observed of having the patient carry a little of the original formula in his inside vest pocket, to be used on the emergency of a return of the drink craving.

A pungent bitter tonic, and warming to the stomach, and whose after effects are tranquilizing to the nervous system, is the best form of tonic for the toper, and with them, strychnia and the lacto or hypophosphites may be combined at the pleasure of the physician.

ADDISON'S DISEASE.—An interesting contribution to the pathology, of Addison's disease was brought by Goodhart before the last meeting of the Pathological Society, and gave rise to a still more interesting discussion. The cases briefly consisted in atrophy or complete disappearance of the supra-renal capsules, associated with all the clinical features of Addison's disease in a marked degree. It would appear, therefore, that the changes in the capsules which Addison and all subsequent writers have considered essential to the disease may, after all, be only one of several conditions capable of giving rise to this group of symptoms. Many facts were brought forward in support of this opinion. Dr. Goodhart himself was or opinion that such cases as these strongly suggested the view that changes in the abdominal sympathetic were the real source of the symptoms—a view which was traversed by Dr. Pye-Smith, who after pointing out that the adrenals were obsolete organs in adult life, the removal or destruction of which in animals produced no effect, warned his hearers against the acceptance of this neurotic theory, on the ground of its extremely simple and seductive nature. He supplemented this by pointing out that pigmentation of the skin was very common, and there was neither pathological nor physiological analogy in support of melasma being due to nerve-changes. Dr. Coupland was hardly prepared to accept Dr. Pye-Smith's views, and pointed out the striking analogy presented by the vomiting and pigmentation of pregnancy in support of disorder or implication of the abdominal sympathetic. He did not think that structural changes need necessarily be found in the nerve-ganglia themselves, although he had met with one notable example, where fibrosis with atrophy of cells existed. He expressed his belief that the changes in the supra-renal capsules were of the nature of a localized tuberculosis, which might take place without any symptoms of Addison's disease. Dr. C. Creighton, in regard to the function of these bodies referred to the researches which have shown that the blood issuing from the capsules, gave chemical reactions different from those which were obtained from blood entering them, and argued that changes such as atrophy or caseation, which practically cut off the blood-supply, might lead to such alteration in the blood as would bring on pigmentation, while cancerous changes, which increased the circulation through the organs, would have no such effect. Finally, Dr. Fowler referred to a case of lymphade-

noma in which the abdominal sympathetic was largely invaded, where the capsules were healthy, and in which all the symptoms of Addison's disease were presented.—[*Med. Times and Gaz.* —[*Med. News.*

DO PET ANIMALS COMMUNICATE CONTAGIOUS DISEASES?—Dr. William Bunce, of Oberlin, O., sends us a report of the following cases in support of the theory: "Pet Animals may be the Means of Spreading Fatal Diseases." On May 1, 1881, he was called to see a boy four years of age, of German parentage, and one of six children; he was found to have diphtheria. On the following day the youngest daughter, two years of age, presented symptoms of the same disease, and on the next day the father and two more children were attacked. After this date all the other members of the family except the oldest boy, contracted the disease. A thorough examination of the house elicited no source of contagion, but in the barn a cat was found having the characteristic lesions of diphtheria. On inquiry, he ascertained that this cat during its period of sickness had been played with by the children. On August 20, 1881, he saw, with his son Dr. W. C. Bunce, a lady, eighteen years of age, who had diphtheria of a very severe type, which terminated fatally on the third day. In a short time the disease developed in the mother and remaining two daughters. A half-grown cat in the room was found to have well-marked diphtheritic membrane in its throat; it was ascertained that its mother and her four other kittens had been in the same condition. The girls had endeavored to cure the cats by removing the deposit, in this way exposing themselves to the contagious influence of the disease. After the recovery of these cases, and the removal of the diseased animals, the spread of the disease ceased. He thinks it fair, therefore, to conclude that the diseased condition of the cats was the cause of the diphtheritic manifestations in the cases reported. Mention is made of these cases as they are of importnce in the consideration of comparative medicine.—[*Medical Record.*

MATERIA MEDICA AND THERAPEUTICS.

NUTRIENT SUPPOSITORIES.—In the *British Medical Journal* of February 19, 1881, is a short description of a plan of rectal feeding which appeared to me to have many advantages over the usual one, of enemata. It is unnecessary to point out the several objections to the latter. My suggestion, based on many experiments, resolved itself into this. Artificially digested meat is mixed with a little wax and starch, and made into a suppository. The practical difficulties of the process were successfully overcome by Mr. Frank Slinger, F. C. S., of the firm of Slinger and Son, of this city (York).

These suppositories are of such a size that the digested and extracted product of twenty ounces of meat from which the insoluble matter is removed, is contained in about five suppositories. The convenience of this method is very great. It is easy for most patients to introduce them themselves; and their use is attended with no discomfort whatever in the majority of cases. After an hour or two the waxy basis is frequently returned, the peptone and extractive being absorbed. In some few cases, owing to irritability of the rectum, the whole suppository has returned; but this can be obviated by the addition of a little opium to each suppository.

I have had excellent results in the use of nutrient suppositories in cases of gastric ulcer, stopping all food by the mouth for a fortnight or so, and ordering the patients to insert a suppository every four hours. Great relief was obtained by the same means, in a case of cirrhosis of the liver, where gastric irritation was a prominent symptom. Several gentlemen have communicated to me notes of cases where equally good results were obtained. Mr. Spurgin, of Maryport, was enabled to prolong the life of an old lady suffering from gastric carcinoma for some weeks after she appeared to be sinking. An immediate improvement took place as regarded the pain, sickness, and prostration, and the patient was enabled to sit up and make her will. Mr. McGill, of Leeds, reports two cases of gastrostomy in the *Lancet* of December 3rd, in which he found the suppositories of the utmost value. Mr. Weeks, of York, has now under his care a case of gastric ulcer, in which they have been retained after carefully administered enemata had returned. It is true that the amount of food administrable in this way is very small, but

every practitioner who has had cases of obstinate vomiting under his care knows how minute a quantity of nutriment will "keep body and soul together" for several weeks or months.—[*London Practitioner.*

THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF ERGOT.—In the March number of the *New York Medical Journal and Obstetrical Review*, Dr. Etienne Evetzky, of New York, concludes the publication of Joseph Mather Smith prize essay, on ergot. Although dealing mainly with the physiological and therapeutical actions of the drug, the author gives a comprehensive account of the history of the different varieties of ergot, their botanical relations, their microscopical structure and their chemical composition; the methods of their production, collection, preservation and preparation for medicinal use; the relations of ergot to other remedies, etc. In comparing the action of ergot with that of a number of other excito-motors of the organic muscular tissue, an arbitrary representative, he remarks that strychnia is most closely allied to ergot in its effects, the main difference being that strychnia acts with far greater energy on the spinal motor centers of the voluntary muscular tissue. Digitalis is distinguished by its predominant stimulating action on the heart. The chief difference between the action of ergot and that of Calabar bean lies in the early occurrence of a paretic state of the voluntary motor apparatus after doses of the latter drug that are not quite toxic. Atropia and nitrite of amyl are mentioned as antagonists to ergot. For hypodermic administration we may use the extract, the fluid extract, or sclerotic acid, diluted in water, with or without the addition of glycerine or alcohol, which altter substances the author thinks, do not improve the solution in the least. The solution should always be clear and not too old, and should be made somewhat alkaline if the injections are particularly painful. The solution should invariably be injected into the muscular tissue, and it is well to begin with small doses. The therapeutical applications of ergot are considered under five heads: 1. Disorders of the circulation and diseases of the organs of circulation. 2. Paretic conditions of the organs composed of organic muscular tissue, the circulatory system excepted. 3. Inflammatory and other morbid enlargements and growths. 4. Abnormal secretions. 5. Symptoms referable to the nervous system, and depending chiefly upon circulatory dis-

orders within it. In regard to contra-indications to the use of ergot, it should be used with extreme caution in patients with an enfeebled heart. Pregnancy is an absolute contra-indication. The use of the drug should be suspended during menstruation, unless it is given for some special condition of that function. To avoid disturbing the digestion it is best to give the drug by the rectum or hypodermically. The remainder of the article deals with the special diseases in which ergot seems capable of effecting good results.

ANÆSTHETIC MIXTURES.—The Vienna mixture, with which eight thousand operations have been performed without an accident, consists of ether, 3 parts; chloroform, 1 part. Billroth's favorite anæstheic mixture is chloroform, 3 parts; ether, 1 part; alcohol, 1 part. An English mixture, known as the A. C. E. mixture, consists of alcohol, 1 part; chloroform, 2 parts; ether, 3 parts.

Owing to the different volatility and specific gravity of the various anæsthetic liquids, the vapors have, necessarily, a different composition from that of the mixtures themselves. The value of a mixture must therefore, in part, be determined empirically. Some experiments have been made in the mixing of heart-stimulants with chloroform. Sanford mixed one pound of chloroform with two drachms of amyl nitrite. Others have added oil of turpentine to the chloroform. The objection so far has been that such mixtures cause a headache.—[*Med. Record.*

PERMANGANATE OF POTASH IN SNAKEBITES.—M. de Lacerda has lately discovered a fact of considerable scientific and practical importance, which he has communicated in a note to the Paris Academy, namely, that permanganate of potassium counteracts very effectively the poison of snakes. In a first series of experiments, a water solution of the poison was injected into the cellular tissue of dogs, under the legs, and its usual effects were large swellings, with abscesses, loss of substance, and destruction of tissues. But when an equal quantity of filtered (one per cent.) solution of permanganate of potassium was injected one or two minutes after the poison, these local injuries were quite obviated; there was merely a slight swelling where the syringe had entered. Next, introduction into the veins was tried, and

the permanganate again succeeded admirably. In only two cases out of more than thirty was there failure, and this is attributed to the animals experimented on being very young and weak, and badly fed; also to the antidote bring administered at too long an interval after the poison, when the heart was already tending to stop. In one series of cases the permanganate solution was introduced half a minute after the solution of venom, and the animal operated on showed no derangement beyond a very transient agitation, and acceleration of the heart's action, for a few minutes. In another series, the characteristic troubles caused by the poison, were allowed to manifest themselves (dilatation of the pupil, quick breathing and heart action, contractions, etc.,) before the antidote was applied. In two or three minutes, sometimes five, the troubles disappeared; a slight general prostration followed for fifteen to twenty-five minutes, after which the animal would walk, and even run about, and resume its normal aspect. Other dogs, poisoned similarly, but not receiving the antidote, died more or less quickly.—[*Boston Jour. of Chemistry.*

ANÆSTHETICS FROM A MEDICO-LEGAL POINT OF VIEW.—Dr. J. G. Johnson, of Brooklyn, presents certain conclusions in the *Annals of Anatomy and Surgery*, which deserve careful consideration.

Anæsthetics do stimulate the sexual functions, the ano-genital region being the last to give up its sensitiveness. Charges made by females under the influence of an anæsthetic, should be received as the testimony of an insane person is. It can not be rejected, but the *corpus delicti aliunde* rule should be insisted on. Dentists or surgeons who do not protect themselves by having a third person present, do not merit much sympathy.

Death from administration of chloroform after a felonious assault, unless the wounding were an unmistakably fatal one, reduces the crime of the prisoner from murder to a felonious assault.

The surgeon has no right to use chloroform to detect crime, against the will of the prisoner.

But the army surgeon has the right to use chroroform to detect malingerers.

The medical expert, notwithstanding he is sent by order of court, has no right to administer an anæsthetic against the wish

of a plaintiff, in a personal damage suit, to detect fraud.

Gross violations of the well-known rules of administering anæsthetics, life being lost thereby, will subject the violator to a trial on the charge of manslaughter.

A surgeon allowing an untrained medical student to administer anæsthetics, life being lost thereby, will subject the surgeon himself to a suit for damages. What he does through his agent he does himself.

The physician who administers an anæsthetic should attend to that part of the business and nothing else. He should have examined the heart and lungs beforehand. He should have the patient in the reclining position, with his clothes loose, so as not to interfere with the respiration; should have his rat-tooth forceps, nitrite of amyl and ammonia, and know their uses, and when to use them, and how to perform artificial respiration.

Chloroform cannot be administered by a person who is not expert, to a person who is asleep, without awaking him. Experts themselves, with the utmost care, fail more often than they succeed in chloroforming adults in their sleep.—*Boston Med. and Surg. Jour.*

FORMULA FOR BROMIDIA.—

℞ Potassium bromide, 4 ounces;
Chloral hydrate, 4 ounces;
Ext. hyoscyamus, 16 grains;
Ext. cannabis indica, 16 grains;
Alcohol, 2 ounces;
Water, q. s. to make one pint.

Kelner's Compendium

POWDER IN MIGRAINE.—

℞ Quinidiæ sulphat., gr. xxiv;
Caffeini,
Acidi tartarici, āā gr. xvj;
Morphiæ, gr. viij;
Sacch. alb., ʒijss. M.

Powder, and divide into five equal parts,—one to be taken morning and evening alone or in a cup of coffee without milk. —[*Medical Times.*

SURGERY.

CASE OF FLESHY TUMOR OF UMBILICUS, WITH PATENT URACHUS.—Dr. John Gay French, reports the following in the *London Lancet*:

On June 30th last I saw, in consultation with the late Dr. Bestall, of Oldham, a case which from its rarity, may be placed on record. There was a fleshy tumor of the umbilicus, with a patent urachus, in a female infant aged about six weeks Mr. Bryant, after his extensive practice, states that he saw only one such case, and in it he was not allowed to operate. In our case there was a hernia-like protrusion of skin, of about three-quarters of an inch in length, surmounted by a red fleshy outgrowth, like a swollen and fungoid glans penis. Whenever the child cried or struggled, this growth became very prominent and vascular; and through a small opening, urine was expelled. The aunt (for the mother would not assist at the consultation) stated that the urine constantly flowed from the umbilicus, and that the "lump" was growing rapidly. In order to stop this and close the canal, we advised operative interference, and after pointing out the advantages, dangers, etc., the relatives agreed to place the child unreservedly in our hands. Next day I operated, Dr. Bestall holding the infant and assisting me. Having ascertained that no knuckle of intestine was in the way, a harelip pin was driven through the fleshy mass, at its junction with the cuticle, and transversely with the body axis. Underneath this pin, and at right angles to it, a needle armed with a stout double ligature was passed, and the threads drawn through. These were then tied tightly on each side under the pin, and the tumor was strangulated. Small pads were placed under the pin ends, and a pad of dry lint over all, with a bandage round the body. When examined on the third day the pin and the fleshy mass came away with the lint pad, exhibiting a clean, granulating sore. As the child was crying, it was dressed quickly with zinc ointment, and a pad as before. On the tenth day, when I again saw it, the sore was entirely healed, and covered with cuticle; no urine had passed through it since the day of the operation, and the relatives were much pleased with the result. As a precaution against protrusion, we advised the use for a while of an umbilical truss. Although the treatment was very simple yet the case is very interesting.

OBSTETRICS AND GYNECOLOGY.

A PROLIFIC WOMAN—SEVEN CHILDREN IN TWENTY-SIX MONTHS, FIVE IN LESS THAN ONE YEAR—HEREDITY.—Dr. J. J. Rockwell, of Winesburg, Ohio, gives the following account in the *Ohio Med. Jour.*:

Mrs. G.——, aged twenty-eight, married three years; tall, and rather slender; herself a twin, as also her mother; gave birth to twins January, 1879. They lived a few weeks and died of internal convulsions. March 27th, 1880, she again gave birth to twins. One lived three weeks and the other nine; both dying of convulsions.

March 12th, 1881, she gave birth to *triplets*. I attended her in this confinement. Labor began about noon. I was called about 2. P. M. I found that her health for a month or two before confinement hac been rather delicate; she lost flesh and strength, but had not been confined to her bed. The first child was born at 6 P. M.—vertex presentation. The second was born an hour and a half later; also vertex presentation. The third was born after a similar interval; but by a breech presentation. Labor progressed without requiring any special interference. The uterine contractions were rather vigorous. The placenta, which was single, and rather small, was expelled in about thirty minutes after the birth of the last child. The length of each cord respectively, was twenty-four, twenty and twelve inches. There was but one set of membranes, and very little liquor amnii.

The first child, a boy, weighed seven pounds; the second, a girl, six and one-fourth pounds; and the third, a boy, five and one-half pounds. The third child lived twenty days and died of convulsions. The other two lived about six months and died of cholera infantum. They were bottle-fed.

The mother made a good recovery, but after the death of her child she exposed herself, and died in less than twenty-four hours after she took to her bed.

Reports on Recent Progress in Medicine.

Article LXI.

Reports on Gynæcology. For the Journal. By R. W. Wilcox, M. D. of Vienna, Austria.

Bipartite Vagina.—The case was that of a young married woman who three weeks before had been delivered of a healthy child. During the second stage of the labor some obstacle presented itself which on careful examination proved to be a strong band the breadth of two fingers, lying directly over the presenting head, and extending in the antero-posterior diameter of the outlet of the pelvis. This band was divided and the labor went on normally. At the time of examination the uterus was of the size usual after birth showing no evidences of division as far as could be determined from conjoined examination. On the anterior wall of the vagina, and extending over the anterior lip to the external orifice of the uterus, in the middle line, was a linear elevation, about a centimeter high, easily movable by the finger, and of about the thickness of the true skin. This felt by the finger seemed to be made up of two layers with a slight space between them. The free edge was smooth. On the posterior wall of the vagina, but not involving the posterior lip of the cervix, was a corresponding fold but not so high as the other.

The existence of this condition of the vagina was not suspected previous to its discovery at the time of labor.

Sarcoma Ovarii.—A girl seventeen years old, one year previous, had undergone the operation for the removal of a medium sized tumor of the left ovary, which the microscope demonstrated to be a sarcoma. She made a good recovery and menstruation had been normal in every way since the operation. At that time the other ovary was supposed to be healthy. Her present condition was as follows: general condition good, the only trace of the previous operation was a linear cicatrix extending from

the left of the umbilicus to within nearly five centimeters to the symphysis. Four small cicatrices marked the positions of the deep sutures. The abdomen was enlarged to about the same extent as in an eight months' pregnancy, and on inspection the tumor seemed to be divided into two lobes, the old cicatrix lying in the furrow, the right side being larger than the left. The internal examination showed that the uterus was the size of the usual unimpregnated organ and was completely anteverted. The tumor, as felt from the vagina, was the size of a child's head and almost as hard. Tumor not movable. A small area of tenderness was found to the right side of the uterus. The abdominal parietes apparantly not movable over the tumor. The operation took place on the next day. The incision being about three centimeters to the right of the previous one and extending from a point on a level with the umbilicus to as nearly as possible the symphysis. A few small adhesions were easily torn through by the fingers and the tumor fully exposed. On tapping with the trocar no fluid escaped and a few other adhesions being broken down, the tumor was removed, the pedicle tied and treated with the thermo-cautery. Three masses, one the size of a man's fist, the others smaller were removed from Douglas' pouch, the peritoneum thoroughly cleansed and the wound closed. The deep sutures were of silver wire and fastened with lead plates and perforated shot while the intermediate sutures were of silk. The usual iodoform dressing was applied. During the operation there was considerable hemorrhage from the adhesions, as well as from the abdominal incision. On the following day there was a considerable elevation of temperature, pain the usual symptoms of peritonitis. Death took place about thirty-six hours after the operation. At the autopsy it was found that the intestines were fully inflated. Many adhesions, some presumably old, and about a half liter of thin sanious exudation in the pelvic cavity. The peritoneum was injected and the position formerly occupied by the tumor was apparent, ragged and covered with some thick blood. The lumbar glands on the left side were enlarged, the mass being soft, in the center almost pultaceous, the size of a large kidney, presumably sarcomatous. The glands on the right side but slightly enlarged. All other parts were healthy. The case is remarkable for the great rapidity with which the second ovary became diseased. Another point was the comparative absence of adhesions as com

pared with the seeming fixation at the examination before the operation.

Extra-Uterine Pregnancy.—The notes in this case having been mislaid, the report is imperfect. A woman about forty years old had noticed for the last seven years an enlargement of the abdomen. Menstruation had been regular during that time but lately inclined to be profuse. On examination a mass about half the size of a child's head was found in the left half of the pelvis, hard, not tender on pressure and apparently separated by a small interval from the uterus but moved with it. The uterus was carried to the right and but slightly above the normal size. The diagnosis of a pedunculated fibroid of the uterus was made and laparotomy determined upon for its removal. At the operation it was found that the mass was of great hardness and subsequent examination after its removal showed it to be a lithopædion. The woman made a good recovery.

Umbilical Fistula.—The patient a young woman, some two months previous, had been through perimetritis, peritonitis and the rest of the category after childbirth. A month previous to first visit, noticed a discharge from the umbilicus which was generally watery and light in color. Examination showed a fistula at the left and very close to the umbilicus. Edges somewhat puckered and reddened. Probe passed into the sinus five centimeters without meeting any obstruction. Powdered iodoform was dusted on and adhesive plaster applied. At the expiration of two weeks the discharge had ceased and the orifice was contracting. No pain or other symptoms connected with the previous history.

Intra-Uterine Injection Apparatus.—This consists of an instrument with a double curve like an old fashioned Sim's catheter. The uterine portion is hollow, the end solid and rounded and at the sides two large rectangular fenestræ, at the bottom in a round orifice. The remaining portion is a double curved ogni which enters the uterine portion and extends nearly to the rounded end. It is thought that the fluid being injected, by a syringe in connection, through the inner tube will come in contact with the uterine cavity through the two fenestræ and the surplus will readily pass between the inner and outer tube and

away by the round orifice above mentioned. The material is silver but in actual practice undoubtedly hard rubber would be preferred. As far as can be seen this apparatus aught to diminish the danger of fluid being left behind in the uterus to a minimum.

Artical XLII.

Report on Dermatology. By A. H. Ohmann-Dumesnil, A. M., M. D., of St. Louis.

Vaccination for Erysipelas and Eczema.—Dr. S. H. Moore, of Buffalo, N. Y., writing to the *Physicians and Surgeons Investigator* says, "During the past fifteen years I have always resorted to vaccination for the cure of salt rheum (eczema?) and erysipelas and when the vaccine *virus* has worked, I have never failed to permanently cure my patient of either *salt rheum* or erysipelas." It seems rather a strange procedure to vaccinate a patient for erysipelas,and we must congratulate Dr. Moore upon his escape from any serious complications. We would not be willing to advise our readers to pursue such a course. Besides, we must accuse the gentleman of obscurity in not acquainting us with the particular variety, if any, for which he claims the efficacy of vaccine virus.

As to eczema being cured by this process it seems to be more of a *post hoc* argument than a reliable one. Those having a large experience in this disease, have not met with any success with this method or at least, not such as to warrant the assertion which we see given above. Dr. G. Behrend, of Berlin, reported a case before the International Medical Congress, in which eczema was aggravated by vaccination. It may be that there was perhaps some slight error in diagnosis, or that other treatment operated cures generously attributed to the vaccination.

Comedones.—Unna, in *Virchwo's Archives*, recommends the following for comedones: Kaolin, 4 parts; glycerine, 3 parts; acetic acid, 2 parts, with or without the addition of a small quantity of some etherial oil. With this pomade he covers the

parts affected, in the evening, and if need be during the day. After several days all the comedones can be easily expressed, most of them coming out by washing the parts with pumice stone soap. He reports uniform success from the use of this method.

The rationale is based upon the view that the comedones are not produced by an accumulation of particles of dust or dirt, but by pigmentary matter which is soluble in acids. It is a well-known fact that comedones which accompany acne, appear not only upon persons exposed to dust or careless of their persons, but also on chlorotic young girls in good circumstances. Besides, the discoloration not only exists on the surface of old comedones, but always descends to the lower parts.

The same results as those obtained by the use of the above mixture, can be secured by bandaging the affected parts for a long time with vinegar, lemon juice or dilute hydrochloric acid. The author concludes by saying that the acids act like cosmetics transforming the black color into a brown or yellow shade, and destroying it gradually altogether. They also produce a quicker desquamation of the horny bed which interrupts the exit of the comedones, and brings to the surface the glandular openings.

Nits in the Hair.—The following methods are given in the *London Lancet*, for the removal of nits from the hair:

1. Freely apply spirits of wine, so as to dissolve the glutinous substance attaching the nits to the hair, and then wash them away with soap and water.

2. Apply to the hair a rather strong decoction of larkspur seeds (Delphinium staphisagria). This quickly kills the parasites. Next wash the head, after two or three days, with carbolic soap. The nits will then readily come away by brushing and combing.

Intertrigo Infantum.—Dr. Klamann gives in the *Deutsche Medizinal-Zeitung*, the formula for a drying powder which he claims is not attended with many of the conveniences of those in use. He claims that erythema and eczema which occur in children in the folds of the neck, vaginal folds and about the scrotum and nates quickly yield to the action of the powder. He has also seen a good effect follow its application to a seborrhœa

capitis in a child continually scratching its scalp. It is also good as a drying powder for skin wounds. The formula is as follows:

℞ Magnesiæ ust. subt. pulv.....5.0 grammes.
Talci Venet. pulv.....20.0 grammes.
Acid Salicylic..... 0.2 grammes.
Mist. olos. balsam..... gtt x.

M. Ft. Pulv. Sig. Apply as deemed necessary. If any indications for it should exist, burnt alum may be added to the above. The magnesia is added to the talc to render the powder less dusty and slippery. The author is opposed to vegetable powders on account of their liability to decomposition and metallic powders he declares entirely non-indicated and positively injurious.

Elephantiasis of Prepuce of Clitoris.—A rare case of this affection occurring in Prof. Rockitansky's clinic is mentioned in the *Obstetric Gzette*. The patient was the mother of eight children, and three months advanced in pregnancy. The affection commenced four years ago, and by its size and sensitiveness her great inconvenience in sitting. The lesser labium of the right side was involved in the mass, which had a circumference of 36 centimetres; and its weight nearly 500 grammes. It was removed with no untoward symptoms, there being no bleeding.

Iodoform in Diseases of the Skin.—Mr. Frazer (*British Med. Journal*) has obtained very favorable results from the use of iodoform in various diseases of the skin. It may be readily employed in the form of an ointment of any required strength, mixed with either lard or vaseline. The strength of the ointment made use of, has ranged usually ten to thirty grains of iodoform to the ounce of cerate, but double this strength can be employed. He claims that it has proved a most useful remedy for the local eczematous eruptions occurring in strumous children and young people, as well as in cases of impetigo. He calls attention to its curative effects in porrigo decalvans. He first applies vesicating collodion over the affected spot and around it for a short distance, having taken care to epilate all the diseased hair over the spot. When the blister begins healing, the iodoform ointment is applied night and morning, or even oftener. In a very short time the hair reappears in a healthy state.

Bichromate of Potassium in Syphilis.—Dr. Arfal has published in the *Union Medical* of Arragon, an article showing the good effects of the above remedy. The dose is one centigramme, in small pills, three times a day. The patients feel improved in a few days, and in a fortnight the improvement is more marked, especially the iritis, which the author says is often produced by patients conveying the infectious matter to their eyes by means of the fingers.

The medicine is enclosed in small pills of tobacco and produces heat of the stomach and secretion of the saliva. There is a diminution of heat and of the pulse and an increase of the urine, which as a rule, assumes a deep red color.

Ainhum.—Histology and Pathology.—M. Suchard gives the result of his microscopic examination of this lesion in *le Progrès Médical* of Feb. 11, 1882. The specimen was the thumb from a child, a native of the Isle of Pines. The disease in this member was in a comparatively early stage, the furrow being 1 mm. deep. Longitudinal and transverse sections were made, the thumb being first treated in alcohol, decalcified with picric acid and hardened with gum and alcohol. The sections were colored with picro-carminate of ammonia and preserved in glycerine.

The author found no vascular nor vervous lesions, but a profound alteration of the connective tissue, derma and sub-jacent structures.

On a level with the furrow the derma is considerably modified. Opposite the furrow may be noticed a bundle of dense connective tissue cut across, which is more marked as it approaches the median plane. Here it is limited by two longitudinal bands of connective tissue. Laterally, however, and in proportion to the increase of distance from the median plane, it becomes less marked and is lost in the derma.

The fibrous bundle is stretched transversely across the furrow; its maximum thickness is on a level with the median line. No yellow elastic fibres can be found in it.

The sweat glands which are very abundant in the pulp of the thumb, are noticed to have been separated by the development of the fibrous tissue, and have comptetely disappeared where this fibrous tissue is in greatest quantity.

The papillæ have disappeared in the lowest parts of the fur-

row, laterally; some are flattened, others elongated. At other points of the pulp of the thumb they are normal.

That part of the thumb only, which is beyond the furrow, has been noticed as being affected with a beginning of fatty degeneration. This is probably due to the fact that the part observed was not sufficiently implicated to have had its circulation cut off and fatty degeneration fully established.

The fibrous bundle, noted above, seems to play a very important part in the evolution of the lesion. It is disposed in the form of a semi-circle in the deep parts of the skin and in the same plane as the furrow. It seems to retract like a cicatricial band and this being slow but constant, it exercises a marked influence upon the adjacent parts, both superficial and profound.

The derma is replaced, in part, by the new tissue and is dragged downwards, its papillæ being effaced and tending to disappear, being flattened in the effort to cover a curved surface larger than the level surface of the normal skin.

As to the deeper parts, they are necessarily compressed between the resisting bone and the fibrous semi-circle which cuts off vascular and nervous supply and ends, after a time, in fatty degeneration the distal part ultimately dropping off.

Clinical Reports from Private Practice.

Article LXIII.

Purpura Hemorrhagica. By T. Hodge Jones, M. D., of Lamar, Missouri.

On the evening of Dec. 27, 1881, Mr. M. P. Leonard a farmer living in Barton County, Missouri. showed me a son of his, some eleven years old, who was convalescing a typhoid fever, but had been feeling, "not so well," the last few days.

In making a hurried examination I discovered a few purple spots on the dorsal part of the hand; asked the mother and father if they had noticed them, and if there were on other portions of the body, such appearances? No former notice had been taken of them; and at once the mother bared her son's back and arms, on which were scattered many spots, some of a size comparable to a silver dime, but the greater number were much smaller. The boy's face was œdematous and sallow, his abdomen rather full, but no other evidences of effusion were apparent. Circumstances compelled me to make a hasty prescription as follows:

R. Lactopeptine.....3j.
Hydrastis Can. Pulv.....grs. xx.
Ipecac.....grs. x.
Podophyllin.....grs.v.

M. Chart. No. XX, Sig. One every three or four hours in daytime.

No more was heard of this case until two days later, Dec. 29, when I was requested to see the patient, who was then some sixteen miles from my office, which circumstance prevented my making many observations, that would have been of interest in this case.

I found the boy in bed, his face besmeared with blood-stains his nostrils packed with coagula and the blood wasting out about the impacted masses. His gums were puffy and pale, the blood oozing from around his teeth and tonsils.

He occasionally vomited blood, his stools were black and of

a jelly consistence, evidently containing great quantities of clotted blood. His urine was mingled with blood streaks, but normal in quantity.

Wherever the blood collected, it coagulated readily. His circulation was 103, temperature 101½° the respiratory movements, like that of languor, with occasional sighs, yet not much oppressed.

The extremities were warm and little more ecchymosed than when first examined. His appetite good, but the stomach could not retain food long, probably on account of the accumulation of blood in it. The bowls moved seemingly from irritation, caused by the presence of coagulum. After directing the parents to use all caution, against any great exertion on the part of the patient, and telling them to allow small quantities of any food the child might relish; I prescribed, (The tinctures used were all the "Specific tinctures," of Thorp & Lloyd Brothers of Cincinnati, Ohio.)

℞ Tinct. Hammamelis Virg.....℥iij.
Tinct. Belladonna Atr.....℥ij.
Tinct. Ergotæ.....℥j
Glycerini
Spts. Frumenti aa q. s. ad.....℥iv

M. Sig. Half teaspoonful every two hours. Also continuedt he first prescription with the addition of about three grains of Carbo Ligni to each dose of the powder. Ordered Inunction of

℞. Adipis.....℥ij.
Spts. Camphor.....℥j.
Spts. Terebenth.....℥ij.
Quiniæ Sulphat.....℥j.

M. Sig. Rub over the stomach, chest, under the arms and along the spine, often enough to keep oily. My next visit was on Jan. 4th. 1882; found the patient very little different in any way, except all the symptoms were much aggravated. The coagula were of a semi-organized aspect, being a grayish transparent color and of tough consistence, taking shape from the part or pocket containing them; and could be lifted out of the mouth, from around the teeth, under the tongue and about the lips in portions the exact counterpart of the cavity from which they were taken. In addition to the enumerated symptoms, the boy at times had, what the parents called "fits," in which the boy was forced backward and the legs set in violent motion, the patient at same time exclaiming, "kick, kick kick," as fast as he could speak it.

The spasm lasted some three minutes, when it passed off and the boy knew nothing of what had taken place during his fit, but was weakened and inclined to sleep. The parents were informed of the danger their boy was in, and advised to be ready for any emergency.

The circulation at this time was 130 per minute, of rather soft prolonged feel under the fingers, easily compressed and the flow uneven. The respirations were irregular and short, about 47 per minute. The temperature 103½,° bowels passive and somewhat swollen, sodden aud tender. His countenance expressed anxiety, the feet were inclined to get cold, and his hands were busy pulling the lumps and ropes of coagulum from his mouth, and he spread them out on the bed and seemed to carefully examine them.

I knew not what to do. The drugs I had with me, were all within fifteen miles of us, and the roads almost impassable. "The boy will die" I said, "but it behooves me as the chosen physician to do all within my means for his relief." Prescribed,

℞. Tinct. Aconit. Rad.....gtt. xxx.
Tinct. Belladonæ Atr.....gtt. xx.
Tinct. Hammamelis, Virg.....℥ij
Acid Muriatic.....℥ss,
Glycerini
Spts. Frumenti aa q. s. ad.....℥iv.

M. Sig. One teaspoonful each four hours in alternation with

℞. Hydrat. Chloral,.....℥iij.
Fld. Hydrastis,.....℥ij,
Tinct. Ergot,.....℥j.
Syrupi Aurant. Cort.
Spts. Frumenti aa q. s. ad.....℥iv.

M. Sig. Teaspoonful each four hours between the other doses. Ordered the inunction kept up, and took my departure.

The sixth day of January an uncle of the boy came to my office and reported that "some thought the patient better," the convulsions had been less frequent for a season. The uncle knew but little to relate, and could throw no light upon the dark picture we have before us. My last prescriptions were substantially renewed and nothing added except the powder he had previously been taking with charcoal; one every time the chloral mixture was given and in with it. The dangerous character of the disorder was again explained and the uncle warned not to hope too much, for the boy must come near unto death, if he recovered at all. The patient died Jan. 7th. 1882.

I have had but little experience with such cases and endeavored to adopt the same plan of treatment in this, that I do in any disordered condition of the system, or any part of it. That is, discover the lesion and meet the indication. Here it appeared to me, the blood-vessels were relaxed in the capillary system throughout, so as to allow oozing and extravasation of blood among the tissues and under the skin More particularly does this seem the case with all the mucous surfaces, which owing to their peculiar formation allow the blood to escape and waste, producing the frightfully bloody sight we beheld in our patient.

Not only, at and near the surface, does the hemorrhage occur, but wherever the capillaries ramify it is found in diffused blotches or spots. Hence, throughout the whole circulatory system the vice occurs

In short, there seems to exist a universal perversion of nutrition. The blood making apparatus and the machinery to circulate it are weakened, a "general hemorrhagic disposition prevails," and the life substance of our patient's body wastes and leaks out before our eyes, until death comes, as a merciful measure to his relief.

Article LXIV.

Genital Irritation. By W. B. Craig, M. D., of St. Joseph, Missouri.

The Societies of the east have been considerably agitated over the discussion of "Genital Irritation," and from time to time the journals have been full of the subject.

This matter has been so fully discussed, that for me to defend, if it were possible, one side or the other, would be tautological to say the least. Still, I can not but object to what, to my mind, seems a rather theoretical and dogmatic turn this argument has assumed on the part of some worthy gentleman.

We must admit the fallacy of the so-called "Reflex Action" of the nervous system to make the one position tenable, and revolutionize our theories completely of this system, or candidly acknowledge facts as the true exponents of pathological conditions.

Now, to deny that testimony is wanting to prove that irritation of the genital apparatus is almost always followed in a short time by muscular incoördination, hysteria, hypochondria, epilepsy and other convulsive seizures, is wrong, especially as the experience of honest, intelligent surgeons proves the contrary. Theory is one thing, practice another, no matter how the results of such practice are explained, whether it be through "shock" to the nervous apparatus, or the removal of nervous irritation by liberating an imprisoned glans penis and removal of hardened smegma.

Not wishing to theorize if capable, or attempting an exhaustive essay, I shall briefly refer to a few cases of nervous disorders, produced by phymosis and strictured meatus, cured by circumcision and urethrotomy. I shall make few or no comments upon them, thus leaving the matter to rest purely upon its merits.

Case 1. Medical student, aet. 27. Visited me four years ago, complaining of palpitation of heart, smothering and hot sensations, in fact, he was hypochondriacal and thus unable to attend

the course of lectures then in progress, and fell considerably behind in his classes; an examination disclosed a tight foreskin which had never been fully retracted to his knowledge. For cleanliness he would inject the pouch of the prepuce with antiseptics, then retract the covering of glans and dry the surfaces which often were herpetic. The glans was small, conical and shriveled, the meatus, red, swollen and sensitive.

Performed circumsision and in six weeks the patient was fully recovered and graduated the following term with credit.

Case II. Child aet. 2½ years. Family physician had been called to relieve it of a crowing respiration and other spasmodic symptoms referable to the throat and chest. Antispasmodics failing to accomplish the desired end, an examination of the genital organs was suggested, and revealed a tight prepuce; and it was further noticed that the penis was in a condition of almost constant priapism, an orgasm being produced by the slightest contact with hand or clothing.

I circumcised this child, and immediately this "laryngismus stridulus" disappeared. The boy has never known an hour's sickness since this, two years ago.

Case III. A clinical patient, child aged three years. History, the grandmother who almost constantly nursed him, handled the penis, until it became so irritable that the naturally long and tight foreskin became adherent to the glans and its ostium closed by inflammatory deposits, so that the mother opened it with a pair of scissors, when an effort at micturition was made, and kept it pervious by the daily introduction of a large needle. The boy was nervous, irritable and anæmic. Muscular incoördination well marked, especially upon lower extremity. The prepuce was drawn still further forward and removed with scissors, the penis being erect although the child was etherized.

The mucous layer of foreskin was pulled from the glans with thumb-nail to the corona, behind which was found a considerable collection of inspissated smegma. No sutures were used. The wound was dressed with a greasy cloth and healed by first intention. Result, *complete relief.*

Case IV. Young man aet. 18, visited me for a suspicious sore upon right lip of meatus urinarius, he also had a tight foreskin. The sore proved a specific one and treatment was imme-

diatealy resorted to, and two years afterward was apparently well. He then became morose, hypochondriacal and almost a confirmed melancholic, though formerly of a very cheerful temperament.

I suggested circumcision, (there being no dyspeptic symptoms) to which he gladly consented, and following up this advice, I also found a preternaturally small meatus. This I incised at the time of slitting up the prepuce. Since the operation he has gradually improved, until now he has regained his mental equilibrium and is a grateful man for this treatment; only regretting it could not have been resorted to some years ago, which in all human probability would have prevented the inoculation of this, then red, irritated, swollen meatus.

Cases V.—VI.—VII. All young men who were circumcised for short, narrow foreskin, which gave great pain during intercourse, and much vesical neuralgia as well as mental disquietude. Result, all that could be expected.

Case VIII. Geo. G., age 30. Widower, two children; has had syphilis some years ago. No traces at present, March 1879. He has a close prepuce, a small, conical glans, irritable meatus. Suffers from neuralgia in various parts of the body, in bladder, rectum and thighs. Is melancholy and haggard, has vertigo also. I advised operation, to which he willingly consented. He has retured frequently and expresses himself as entirely relieved and happy. He is contemplating another *better half.*

I could report other cases of equal severity and importance, but I do not wish to occupy more time or space. Enough has been adduced to put the matter beyond a reasonable question or doubt to any candid mind, and statistics might be heaped higher than vision reaches and yet skepticism would plead "Facts are wanting."

What is noticeable in these cases is that no other cause could be assigned for these conditions of the mind and nervous system, excepting two who had syphilis, but neither one seemed annoyed in the least in this respect as they were "over their scare" and well. Again, the recovery from alarming and dangerous conditions was so immediate and striking that I was forced beyond a question to admit the relation of cause to effect, and to establish in these cases and their relief by surgery a veritable *post hoc, propter hoc.*

Article LXV.

Monocular Exophthalmos. By S. Pollak, M. D., Surgeon to the Eye and Ear Infirmary of the St. Louis Hospital, St. Louis.

A girl of fourteen years, weighing 140 pounds, fully matured, robust and hardy, of very quiet, modest demeanor, and of industrious habits, has, for the last two years, perceived a gradual protrusion of the right eye, which, however, has not caused her the least inconvenience; indeed, but for its disfiguring effect, neither she nor others would have scarcely noticed it. Her parents and teacher became at last anxious on account of the recent rapid progress of the protrusion, and they determined to seek medical advice.

The following are the notes of my "clinical record":

A beautiful clear blue eye is seen to protrude from its orbit; its displacement is in a vertical line, the upper line of the right eye being on a level with the lower border of the left eye. The bulb is nearly entirely out of its socket, and rests upon the zygoma. Mobility, however, is *not* impaired. With a proper effort, the eye can be retracted within the orbit, permitting closure of the lids, but will drop out and down, when the strain is relaxed. The media are clear, the pupil responsive to light. The fundus normal, except slight hyperæmia and œdema of the optic papilla. Vision is like that of the left eye, good, ($\frac{20}{20}$), accommodation normal.

She has had no pain, no vertigo until recently when she noticed at rare intervals, slight circumorbital shooting pains. There is no hypertrophy of the thyroid gland. Basedow's disease (exophthalmic goitre) must be excluded at once; this is moreover a bilateral affection, while this girl is effected only in one eye. Neither are there any cardiac murmurs or palpitations, which characterize exophthalmic goitre.

Exophthalmos may be produced by tumors, solid or fluid, by hypertrophy of the deep orbital fat cushion, etc., and by developing growth of the peri-orbital osseous cavities. Aneurismal

tumors may also cause exophthalmos, but the total absence of a bruit and pulsation in the cranium excluded this hypothesis.

Examination determines the presence of a firm resistent body of a bony character, on the superior and external margin of the right orbit developed downwards to a point about half an inch below the line of the other brow. This tuberous growth seems to be proliferative in character, *i. e.*, a *hyperostosis*; the pressure due to its bulk, crowding down the eye, and giving unnatura- prominence to the supraorbital ridge.

The lachrymal gland can be distinctly felt underneath. There is also a considerable osseous prominence on the squamous portion of the right temporal bone of the size and form of a silver fifty cents piece painless on pressure. It is quite probable, that this hyperostosis involves the entire upper plate of the orbit, thus narrowing its cavity and crowding the eyeball out and down. The girl's ability to retract the ocular bulb into the orbital cavity *at will*, is probably the result of an unusual and conjoint effort of all four recti muscles, strong enough to compress the softer tissues within; their elasticity expels the eye again, as soon as the voluntary contraction of the recti muscles ceases.

It is not probable, that the hyperostosis encroaches upon the cavity of the calvarium; it is more probably limited to the interspace existing between the tables of the frontal, malar and temporal bones.

While I discerned only hyperæmia and œdema of the optic disc another observer thought he detected an optic neuritis. A true neuro-retinitis can only result from the encroachment of a tumor upon the sheath of the optic nerve, which is incompatible with good vision (?). Optic neuritis is due either to cerebral disease, to a true inflammation of the vasomotor nerves (?); or it may originate in mere hyperæmia caused by venous stasis (?). Compression of the veins does not produce choked disc, but only hyperæmia and œdema. Vision is not necessarily much disturbed thereby. In our patient's case, the fact that the brain is still free from inflammation, accounts for the absence of all disturbances of accommodation. But the recent more rapid development of the tumefaction on the squamous portion of the temporal bone, forebodes no good result. It is believed to be *malignant* tumor of the bone.

As the patient resides in a remote county, and is unwilling and unable to remain under observation, no therapeutic measures could be adopted. The careful and persistent use of a solution of arsenite of potassa was suggested.

Editorial.

Article LXVI.

"The College for Medical Practitioners."

This is an institution *sui generis*. There exists no other such medical school in the world. Its name—the caption of this article—plainly indicates its object. It is "the establishment of a College at which Medical Practitioners may review their Collegiate Courses and receive instruction in current advances of the several branches of Medicine and Surgery and the Specialties connected therewith."

In connection with the College there will be Clinics for Diseases of the Eye; Diseases of the Nose, Throat and Ears; Diseases of the Digestive Organs; Diseases of the Genito-Urinary Organs and the Rectum; Diseases and Deformities of Children; Diseases of Women, and in general, every department which engages the interest of every practitioner of medicine. There will also be Dissecting Rooms and Laboratories. The latter will contain every apparatus that is required to facilitate the imparting of practical knowledge to medical practitioners.

During the last eleven years we have had the pleasure of meeting, as a private instructor, a large number of medical men, who temporarily suspended practice to become better acquainted with some one or several of—what seemed to them—the more important branches of medicine. From their often expressed wants, and from semi-suggestions made by many of them during the last several years, a plan for an Advance Medical College slowly took a definite form; but not until February last, were any steps taken to put the plan into effect.

Those who have scanned the Catalogues issued from the Medical Colleges during the last five or seven years, must have noticed the large and continually increasing number of medical practitioners who are availing themselves of the great advant ages arising from a more thorough knowledge in several departments of medicine and surgery.

To make sure that we were not too far in advance of the times, or led astray by what seemed to us to be a very decided "want," that must have long been felt by many practitioners, we wrote letters to a large number of *well-known* physicians residing in this and adjoining States, concerning the possible need and success of such an institution as the one contemplated. From each of whom we received such encouragement, that our enthusiasm, which we feared was too great, was made still greater. No one will read these letters without appreciating the need of a "COLLEGE FOR MEDICAL PRACTITIONERS." The following are some of their expressions on this point: "It will be a great convenience to the country practitioner." "You may count me as one of your most attentive students." "Why did you not think of this before?" "That's business; it will pay you and those who go to hear you." "I am very sure you have invented a method of education that will become very popular and profitable." "It is a desideratum." "We have enough Colleges to make doctors, but we sorely need a College to improve those already made." "I am pleased with the idea, as the want of such privileges have always been felt by general practitioners." "Your method of teaching is a good one; I am sure you will be successful." "Knowing several of your associates in your enterprise, as well as yourself by reputation, I feel quite sanguine of your success." And so on in almost every letter. To give all of them would fill several pages in the JOURNAL.

The want of a "COLLEGE FOR MEDICAL PRACTITIONERS," is not only felt in the West, but in the East as well, as is plainly indicated by the following extract from an Editorial in the N. Y. *Med. Record* of March 25th:

"There is hardly a progressive medical man away from the centres who does not at some time or other hope for an opportunity to live over the general experiences of his more active student life; to study disease in the hospital ward; to perfect himself in diagnosis; to make sure of physical signs; to brush up on his surgical anatomy; to look through his microscope over the shoulder of the pathologist; to witness operations by the hospital surgeons—in fact, to be more or less directly in communciation with the advanced thinkers and workers of his day.

"As a rule, such gentlemen who visit the larger cities are *earn-*

est men, * faithful workers, and determined students. No one must doubt that they are not willing to do to the uttermost whatever can be done to render their stay from business and home as profitable as possible. In this connection it becomes our medical teachers to ask themselves the question whether or no the *facilities which are afforded these willing and ambitious workers are what they should be.* We think it must be answered in the *negative.* It is true that there are occasionally given special courses of instruction in different branches, but these generally are little more than *spasmodic efforts* and so far as meeting the general demand for post-graduate instructions, practically *amount to nothing.* There is nothing left for the medical man but attendance upon some one of the medical colleges, and the taking of what he needs from the general course. Comparatively speaking, he obtains *very little.* He does not expect to go over the fundamental branches as a student, and consequently, PRECIOUS TIME IS LOST, which by some proper system of study might be thoroughly utilized. He may visit the college clinics, the hospital wards, or occasionally listen to a didactic lecture, but in all this he necessarily feels that he is treated MORE AS A FIRST-COURSE *student than as a man whose serious business it is to perfect himself in the* HIGHER BRANCHES of his calling. All this seems to our mind to prove the necessity for the better development of post-graduate courses. Instead of the latter being merely supplementary to the ordinary college course, as at present, they should be *entirely distinct* and independent, and every effort should be made to systematize the advanced studies belonging to such a course, in a manner to properly economize the time of stay in the city and to thoroughly utilize the numerous opportunities for clinical instruction which abound in the great cities. Indeed, there is no reason why SPECIAL ADVANCED SCHOOLS should not be created for the purpose. We are sure if properly managed, that they would be thoroughly successful."

As many of our readers may be interested in knowing more of this institution, we may, if perfected, give its complete working plan in the next issue.

Dr. Hooper, Little Rock, Ark., in the absence of Dr. Woodard, who is now in Europe, will preside at the American Medical Association at St. Paul, next June.

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* Italicized and capitalized by the Editor.

Book Reviews.

Article LXVII.

Development of Rectal Cancer. (With plates) by W. Harrison Cripps, F. R. C. S. (Reprinted from *Transactions of the Pathological Society of London*, for 1881.)

This reprint, for which we embrace this opportunity of thanking the author, is a pamphlet of twenty-five pages, illustrated by ten full page lithographic plates. It is for the most part explanatory of a series of microscopic specimens illustrating the pathology of malignant rectal disease, but contains, nevertheless, a good resumé of the clinical differentiation between malignant and benign neoplasms of the rectum to make the contribution of no mean value to those who are not habitual workers with the microscope.

The author is a believer in neither mechanical irritation or obstruction as a cause of malignant growths, nor does he consider that inherited predisposition can stand the test of critical inquiry, but suggests rather that the cellular collection which we designate cancer, is due to specific irritation. Although the exact nature of the irritant infecting the cells is unknown, it would appear to be from some cause external to the body, having a special affinity for certain structures. The irritant finds its way into the blood by absorption and whilst in the vessels is incapable of multiplying or doing harm; but when it becomes stationary by extravasation into the tissues as the result of a blow, for instance, it immediately becomes active. Although no parasites have as yet been discovered by the microscope, yet the myriads of minute specks of granular material seen when examining a section of malignant disease might contain any amount of organisms which, at present, are incapable of recognition.

This is briefly stated the theory suggested. In support of this theory of specific contagion, auto-inoculation of cancer by constant contact is adduced. The experiments to ascertain the inoculability of malignant growths which have hitherto been made, have failed because, as the author thinks, the material was inserted *beneath* the skin and he suggests that we have reason to believe that more than negative results would be obtained if portions of the disease were kept sufficiently long in contact with an *epithelial* structure. He saw such an experiment carried out by nature in a woman who had a large cancerous ulceration involving the breast and the skin of the thorax. Being unable to wear

any dress, she kept her left arm bent at a right angle in constant contact with the disease. This resulted in a large cancerous ulcer several inches in diameter in the neighborhood of the elbow which was in contact with the disease of the thorax.

The great role which micro organisms play at the present time in surgical diseases may account to some extent for the theory, advanced, but as yet no conclusive evidence has been offered for its demonstration and it is to such men as Cripps, who have more than the average opportunity for examining malignant growths in their various stages of development, that the profession looks to for the solution of intricate problems such as the cause of malignant neoplasms. Frank J. Lutz.

Wood's Library of Standard Medical Authors for 1881, Published by Wm. Wood & Co., New York:

1. Artificial Anæsthesia and Anæsthetics. By Henry Lyman, A. M., M. D. 8vo., pp. 338.

2. Coulson on the Diseases of the Bladder and Prostate Gland. Sixth Edition revised.

3. A Treatise on Food and Dietetics, Physiologically and Therapeutically Considered. By F. W. Pavy, M. D. Second Edition, 8vo., pp. 402.

4. A Handbook of Uterine Therapeutics, and of Diseases of Women. By Edward John Tilt, M. D. Fourth Edition, 8vo., pp. 328.

5. A Treatise on Albuminuria. By W. Howship Dickinson, M. D. Cantab, Second Edition, 8vo., pp. 308.

6. A Treatise on the Materia Medica and Therapeutics of the Skin. By Henry G. Piffard, A. M., M. D. 8vo., pp. 351.

7. A Treatise on Diseases of the Joints. By Richard Barwell, F. R. C. S. Illustrated by numerous engravings on wood. Second Edition revised and enlarged. 8vo., pp. 462.

8. A Treatise on the Continued Fevers. By James C. Wilson M. D., with an introduction by G. M. Da Costa, M. D. 8vo., pp. 365.

9. A Medical Formulary based on the United States and British Pharmacopœias, together with numerous French, German and Unofficinal Preparations. By Lawrence Johnson, A. M., M. D. 8vo., pp. 402.

10. Clinical Lectures on the Diseases of Old Age. By J. M. Charcot, M. D. Translated by Leigh H. Hunt, B. Sc., M. D., with additional lectures by Alfred L. Loomis, M. D. 8vo., pp. 280.

11. A Treatise on the Diseases of the Eye. By Henry D. Noyes, A. M., M. D. 8vo., pp. 360.

Wood's Library for 1881, exceeded the anticipations which had been formed from the general excellence it had attained in 1880. The authors selected have been of the first order, and selected with the greatest care. The works are such that the price asked for them seems almost fabulous for its cheapness. How any wide-awake and intelligent physician who attemps to keep abreast of the times, in medical matters, can dispense with this cheap, valuable and elegant collection, we cannot understand and we can hardly imagine such to be the case. The binding of the Library for 1881, and its typography, present a neater and cleaner appearance and the books are such as to make a very nice display on a physician's book-shelves.

1. Anæsthesia and anæsthetics may yet be considered but in their infancy and on that account all that pertains to them is interesting. The book before us, though not an exhaustive treatise, is one that cannot fail to be popular, as it is written in a pleasing and interesting style. The various questions connected with anæsthesia are taken up in order, and take up the first hundred pages or so.

The remainder of the work is occupied by the consideration of forty-seven different anæsthetics of more or less value, and this is followed by anæthesia by rapid respiration and by electricity.

Illustrations of different forms of inhalers are given and and sphygmographic tracings of the pulse, under the influence of different anæsthetics.

2. This work, long regarded as authoritative, has become somewhat antiquated, but the revision of it has brought it up to the present times, and has necessitated a great many changes. Some chapters have been omitted and others very judiciously added.

The causes of stone are carefully considered, as also the solvent and preventive treatment of calculus. The statistics of lithotrity and lithotomy are given at such a length as may prove of value, and Prof. Bigelow's operation is deservedly given a chapter to its consideration, the author acknowledging the great importance of the method and the revolution which it has created in the doctrines held in regard to lithority.

3. The subject of food is one of the highest importance to

the healthy as well as the sick. The author gives full attention to the different aspects of food in the physiological consideration and devotes much space to alimentary principles and substances, the preservation of food, and the principles of dietetics. The practical dietetics, although not embracing many pages, are perhaps the most important to the physician, as it is from these that he expects results. The principles laid down, being well mastered, readily enables the careful reader to form his own conclusions correctly in regard to the proper course to pursue in respect to the alimentation of children and of patients.

The diet of infants, of training, therapeutic dietetics and hospital dietetics conclude this treatise.

The part devoted to beverages is of great importance. The author believes that, from the evidence gathered by him, "the main portion of alcohol ingested, becomes destroyed within the system." He, however, very justly does not consider the subject in regard to alcohol, as at all settled.

4. The work of Dr. Tilt has been known long enough not to need any introduction. This is a reprint of the fourth edition, and the object and scope of the work is clearly expressed in the following words of the author, taken from the preface: "Firstly, the paramount importance of female hygiene for the relief, cure and prevention of diseases of women Secondly, the constitutional origin of many diseases of women, as well the impossibility of curing them and preventing relapses, unless the treatment comprehends such measures as are known to favorably modify conconstitutional taints. Thirdly, the possibility of curing most diseases of women without surgery, by the better application of old familiar remedies and sound hygiene. Fourthly, the utter impossibility of curing aggravated forms of the most common uterine affections unless surgery be combined with medicine and hygiene."

5. This is indeed worth more than one-half of the library for 1881. It has been extensively read and acknowledged as one of the best works on the subject, and the complete and faithful manner in which it has been reproduced, leave nothing to ask for. The plates and engravings are numerous and of a much better quality than those usually met with in this series.

6. Dr. Piffard has expended a vast amount of time and labor in the preparation of this mannual and it is admirably conceived, but it can only prove useful to those who have a library which contains all the books of which reference is made. For instance, under Polygonum Hydropiper, we read: D. Detersive in atonic and scrofulous ulcers, 26, 811. Condylomata, 35, 186. The figures refer to authorities which we find to be respectively as follows in the bibliography: 26. Cazin, F. J. Traité pratique et raisonnée des plantes medicinales. 4th edition, Paris, 1876.

35. Apollinaris, Kurtzes Handbuchlin und Experiment vieler Arzneyen durch den ganzen Körper des Menschen, auswendig und inwendig von dem Haupt an bis auff die Füsse, Frankfurt am Main, 1579.

Of course, there are very few who can have access to these works and to all others, the description given above, of the local use of the drug seems very short and unsatisfactory.

But if we complain of the first part of the book, we must express one pleasure upon looking over the second, which deals with the therapeutics of skin diseases. Here it is that the author really shows himself and in this case he does so to advantage. He believes that the judicious admixture of local and internal treatment is the most effective—this being a mean between the exclusive schools of Hebra and of Alibert.

Diseases are taken up in alphabetical order, and carefully considered, the diagnosis being made as important as the treatment, a course which cannot fail to impress the reader with the necessity of recognizing the affection before attempting to treat it.

The author regards eczema as dependant upon a constitutional state, and recommends general treatment in conjunction with local applications.

The majority of cutaneous diseases and disorders that may be met with, are here considered, and the author does so in a manner which is pleasing, instructive and authoritative enough to be followed scrupulously. This embodies the results of Dr. Piffard's practice and also that of several of his colleagues of the New York Dermatological Society. The author has adopted the nomenclature of the American Dermatological Association, which is considered one of the best, although objected to by many because it rests upon Hebra's system.

A formulary is added which contains a large number of formulæ taken from the works of distinguished dermatologists, and from which the reader may select those he considers the most appropriate. We find that some of the formulæ are in several instances hastily written and imperfect, but on the whole they can be relied upon, and we congratulate Dr. Piffard upon his work.

7. This is a good volume containing twenty chapters and much that may be learned concerning many of the affections of joints. The author has entirely rewritten the book and proceeds from the consideration of the physiological anatomy of bones, acute and suppurative synovitis to the various inflammatory diseases of joints not commencing in the bones. There are considered acute ostitis, chronic ostitis, arthritis deformans, inflammation and degeneration of cartilage, hip-joint disease, sacro-iliac disease affections of sheaths and bursæ, hysteric pseudo-disease of joints, restoration of crippled joints, genu valgum and varum and the removal of diseased joints. In an appendix to the chapter on hip-joint disease he considers the question of lengthening, and

comes to this conclusion: "That additional growth from hip disease, though quite unproven, may occur; that if it does occur it will cause lengthening to between half and three-quarters of its amount. Hence to make an appreciable difference in the length of the limb, such supposititious growth must be large."

The illustrations of this volume are, for the most part good. Some are very poor, but they are few in number. The typographical work is good, although the amount of matter has forced the publisher to set it very close, which is a disadvantage in reading.

8. The author has aimed, in this volume, rather to give clinical facts and experiences, than theoretical considerations, endeavoring to make his work as practical as possible.

Prof. Da Costa's introductory chapter is devoted to the treatment of fever in general as far as related to the forms described by the author. His directions are general and plain.

Dr. Wilson takes up into consideration simple continued fever, influenza, cerebro-spinal fever, enteric or typhoid fever, typhus fever, relapsing fever and dengue, as he thinks the time has not yet come, to include pneumonia, diphtheria and acute rheumatism among the fevers.

He consideres the exanthemata as entirely without the scope of his work, and their classification among fevers as unscientific and provisional. Dengue he does not consider an exanthem as its eruptions are so variable and inconstant as to preclude its admission into that class.

9. This is a work which seems to be more designed for the pharmaceutist than the physician. Yet even to the dispensing druggist, but little that is here found can be assimilated by him as the manufacturers of chemicals and pharmaceutic supplies have all the officinal preparations ready made for the druggist, and are constantly bringing out new remedies that no pharmacopœia can keep pace with.

The chief merit of the present volume lies in its brevity, and the greater intimacy it may effect with the pharmacopœias of foreign nations, a thing which will be necessary until an international pharmacopœia is established.

10. The name of Charcot alone commands respect wherever medicine has followers. Senile pathology, the febrile state in the aged, gout and rheumatism in all their forms, and the clinical importance of thermometry in old age, constitute the twenty-one chapters by Charcot.

The remaining ten chapters by Prof. Loomis include senile pneumonia, chronic catarrh of the bronchi, asthma, atheroma, apoplexy, cerebral softening, chronic gastric catarrh, senile constipation and senile hypertrophy of the prostate.

The translation of Charcot's lectures has been well made,

and of the subject matter, as of that of Prof. Loomis' lectures, it is unnecessary to speak, as their eminence in the profession is a sufficient guarantee of the excellence of their lectures.

11. This volume is a good compilation and condensation of the knowledge of ophthalmology as held at the present time. There is a great deal of original matter interspersed throughout, and the long experience of Dr. Noyes as a teacher of this branch of medicine, has eminently fitted him for the work he has undertaken and brought to such a successful termination. The book is a good exponent of the present status of ophthalmology, and has been written in such a manner as to give a fair knowledge of the subject to the careful reader.

We notice that an operation for the advancement of the rectus described in the Journal, June, 1881, by A. E. Prince, is given an appropriate and deserving place. The illustrations are numerous and good and Prof. Noyes can be readily recognized in many of the cuts, he appearing the same as ever.

The Nurse and Mother. A Manual for the Guidance of Monthly Nurses and Mothers. Comprising instructions in regard to pregnancy and preparation for child-birth, with minute directions as to care during confinement, and for the management and feeding of infants. By Walter Coles, M. D. 8vo. pp. 153. (St. Louis: J. H. Chambers & Co. 1882.)

Dr. Coles has written, in this, a very handy little volume, containing much that is good, and little that is new. But if most of the matter is old, it is sound and will bear repetition very well. He, perhaps, expects too much of the nurse, and may work some injury if the book falls into the hands of those who are "wise in their own conceit," and who may imagine that after a perusal of this manual, they will be qualified for any emergency that may arise. However, a judicious use of the precepts given cannot fail to give the utmost satisfaction both to patient and physician.

On the whole, Dr. Coles' Manual is a good one, and one that can be recommended for the use for which it is intended.

The book is well gotten up as far as regards paper, binding and type, but the press work is not good, there being, however, but few works that are entirely illegible.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D. Fifth Edition thoroughly revised, with illustrations. 8vo. pp. 360. (Phila.: H. C. Lea's Son & Co. 1881. St. Louis. Hugh R. Hildreth Printing Co.)

Smith's treatise has always been a popular one and is

eminently adapted for the use of students. This, the fifth edition has been improved, certain additions having been made to the various chapters and a few additional diseases being treated of, such as strumous ophthalmia, which was confided to Dr. O. D. Pomeroy, Surgeon to the Manhattan Eye and Ear Infirmary.

Dr. Smith has had a large clinical experience in children's diseases and knows whereof he speaks. This book is intended as a practical one, theories being discarded as much as possible and clinical data being abundantly employed.

We are sorry to see that so little space has been accorded to the consideration of the dermatoses of children, especially that the author has not prepared his remarks on this subject by a general consideration of the characteristics of skin diseases in infancy. Six pages are devoted to eczema, which is giving but a very imperfect notion of a disease which is so inveterate and persistent.

The Science and Art of Midwifery. By William Thomson Lusk, M. D. With numerous illustrations. 8vo. pp. 687. (New York: D. Appleton & Co. 1882. St. Louis: Hugh R. Hildreth Printing Co.)

This is a work that has been brought up to the times, and which is a credit to the author. It is written in good English and shows that Dr. Lusk is not only acquainted with his subject by personal experience, but that he has paid great attention to its literature.

He does not pay so much attention to the theories of authors as to the showings of clinical experience and we may here add, that this is becoming an almost distinctly American trait, the elaboration of hypothesis being left to our trans-Atlantic brethren.

The author has made an improvement on Tarnier's forceps and has made a novel cephalotribe.

Throughout his work he gives preference to German methods and recommends the dorsal position in labor and for the application of the forceps.

He has dwelt considerably and correctly, we think, on the importance due to deformed and contracted pelves. All the types and varieties are considered accompanied by such hints as may prove most useful.

The teratological part is not very long but the admirable work of St. Hillaire will remain for many years to come, the authority on this subject and an exhaustive treatise on this alone would embrace several volumes.

Books and Pamphlets Received.

Article LXVIII.

An Index of Surgery: being a concise Classification of the Main Facts and Theories of Surgery, for the Use of Senior Students and Others. By C. B. Keetley, F. R. C. S. 8vo., pp. 208. (New York: Bermingham & Co. 1882.) Price $1.00.

Medizinische Jahrbücher, herausgegeben von der K. K. Gesellschaft der Aerzte. Redigirt von Prof. E. Albert and Prof. E. Ludwig., Jahrgang 1881. III. IV. Heft 8vo. pp. 291–574. (Wien: Wilhelm Braumüller, 1881.)

A System of Surgery, Theoretical and Practical in Treatises by Various Authors. Edited by T. Holmes, M. A. Cantab. First American from Second English Edition, Thoroughly Revised and much Enlarged, by John H. Parker, A. M., M. D., assisted by a Large Corps of the most Eminent American Surgeons. In Three Volumes with many Illustrations. Vol. III. 8vo. pp. 1059. (Phila.: Henry C. Lea's Son & Co. 1882. St. Louis: Chambers & Co.)

Third Annual Report of the State Board of Health of Illinois, with the Official Register of Physicians and Midwives, 1880. 8vo., pp. 268. (Springfield: H. W. Rokker, State Printer, 1881.).

"Rande" (Charles C. Scott),—A Medico-Legal Record. By one of the Expert Witnesses. (Reprint from the *Alienist and Neurologist*, April, 1882.)

Hubbard's Newspaper and Bank Directory of the World, with Gazetteer and Atlas combined, 8vo., Vol. I., pp. 1-1228. Vol. II., pp. 1229-2591. (New Haven, Conn. Edited and Published by S. H. P. Hubbard, 1882.)

Transactions of the American Medical Association for 1881. Vol. XXXII., 1881, 8vo., pp. 684. (Philadelphia: Printed for the Association. Collins, Printer, 1881.)

Anæsthesia and Non-Anæsthesia in the Extraction of Cataract. With some practical suggestions regarding the performance of this operation, and comparative statistics of two hundred cases. By Hasket Derby, M. D. 16mo., pp. 32. (Cambridge: Printed at the Riverside Press, 1882.)

News Items.

Article LXIX.

We are glad to announce to our readers, that the *Scientific American*, although somewhat injured by the late fire in New York, has already recovered and is in better trim than ever. The new offices are located at 261 Broadway, corner of Warren Street. A noticeable fact is, that no issue was delayed or even impaired in appearance, and speaks a great deal for the enterprise of the firm of Munn & Co.

The St. Louis Medical College Commencement Exercises were held, as heretofore, at Mercantile Library Hall, which was filled to its utmost capacity, by a large, fashionable and appreciative audience.

The Audrain County Medical Society, of Missouri, organized ten years since, holds weekly meetings in Mexico, on Friday evening. The membership is about twenty, and its officers for 1882 are: President, Dr. P. T. Rothwell; Vice-President, Dr. W. H. Lee; Secretary, Dr. W. W. McFarland; Treasurer, Dr. Isaac Sinclair.

The Missouri Medical College held its Commencement Exercises at the Grand Opera House, a rather large class graduating. The Opera House was thronged by a large concourse of interested friends and spectators.

The Next International Medical Congress will be presided over by Prof. Panum, of Copenhagen, at which place the congress will hold its sittings in 1884. The Secretary-General will be Dr. Carl Lange.

Dr. T. Hodge Jones, who details the course of a case of purpura hemorrhagica on another page of the present number of the Journal does so in the hope that some one may lend him prac-

tical assistance and advice in regard to more efficient treatment in such a case.

THE Tonga suit recently decided in favor of Messrs. Parke, Davis & Co., of Detroit, seems to have raised quite an excitement and the average practitioner is being flooded with literature bearing on the subject, pro and con. We do not care about taking sides with either party, as both are well able to defend themselves, and we are sure that physicians are intelligent enough to arrive at a decision upon the documentary proof which has been so lavishly furnished by the parties most directly interested in the matter.

THE St. Joseph Hospital Medical College held its Commencement exercises at Tootle's Opera House, Monday Evening, Feb. 27th, 1882, with a class of nine graduates.

WE have received the *Medical Register*, a monthly record of the literature of medicine and allied sciences with critical reviews, book notices and other items of a bibliographical character in so far as relates to medical publications. It is well gotten up, at one dollar per year, by P. Blakiston, Son & Co., of Philadelphia.

MESSRS. Wood and Appleton, of New York, and Leas of Philadelphia, have formed a combination to print medical books at the rate of ten cents. The poor but honest practitioner of medicine, (and who doesen't know him?) will profit in the cut rates, whether the publishers do so or not.

Miss Marguerite Owen Compton, daughter of Dr. J. W. Compton, editor of the *Evansville Medical Reporter* that was, was married to Ira Dayton McCoy Esq., at Evansville, Ind., on March 28th. We wish the young couple many happy returns of the day and may Dr. Compton be cheered by the babblings of his grandchildren.

THE Secretary of the Surgical Section of the American Medical Association requests all gentlemen who are writing papers to be read before that Section at its next meeting, to notify him at least one month before the time of meeting. And also to give at the same time, the titles of their papers and their probable length. By so doing the titles will be published in time for the members to be prepared for the proper discussion of the various

subjects. And he suggests that all gentlemen taking part in the debates, reduce their remarks to writing, so that the report may be more accurate and valuable as a mirror of present scientific thought. Communications should be addressed to William A. Byrd, M. D., Sect. Surg. Section American Medical Association, 407 Jersey Street, Quincy, Ill.

DR. Theodore Schwann, Professor of Physiology in the University at Liege, died at Cologne on January eleventh, at the age of seventy-one. He was celebrated as the first exponent of the doctrine of cell-formation in animals.

WHERE IS THERE AN EPIDEMIC OF DIPHTHERIA?—Drs. H. C. Wood and Formad desire to know of the existence of an epidemic of malignant diphtheria in order that they may continue their research upon the nature of the diphtheric poison. Dr. Formad will go to any locality within eight hundred miles of Philadelphia. All letters may be directed to the University of Pennsylvania.

E. B. TREAT, of New York, announces the early publication of an illustrated quarterly of medicine and surgery. Each number will contain four plates, chromo-lithographs, autotypes, or fine wood cuts, illustrative of various diseases in medicine, surgery and pathological anatomy. Each plate will be accompanied by a history of the case depicted, besides short practical articles illustrated by wood cuts. The names of the editors are not given.

DIED, in Philadephia, on the seventh of March, age seventy-seven years, JOSEPH PANCOAST, M. D., Emeritus Professor of Anatomy in Jefferson Medical College. Dr. Pancoast was born in Burlington County, N. J., in 1805. He studied medicine at the University of Pennsylvania, and graduated in 1828. In 1838 he succeeded Dr. George McClellan as Professor of Surgery in Jefferson Medical College, and in 1861 was transferred to the Chair of Anatomy. In 1873 he resigned his professorship, and was elected Emeritus Professor of Anatomy.

METEOROLOGICAL OBSERVATIONS.

By A. WISLIZENUS, M. D.

The following observations of daily temperature in St. Louis are made with a MAXIMUM and MINIMUM thermometer (of Green, N. Y.). The daily minimum occurs generally in night, the maximum at p. m. The monthly mean of the daily minima and maxima added and divided by two, gives quite a reliable mean of the monthly temperature.

THERMOMETER, FAHRENHEIT—FEB., 1882.

Day of Month.	Minimum.	Maximum.	Day of Month	Minimum.	Maximum.
1	26.0	41.0	18	42.0	54.5
2	34.0	49.5	19	39.0	42 0
3	33.0	47.0	20	36.5	47.5
4	34.5	45.5	21	**21.0**	29 0
5	37.0	56.5	22	21.0	38.5
6	41.5	64.0	23	24.0	36.5
7	46.5	64.0	24	24.0	39.5
8	31.0	40.5	25	31.5	52.0
9	34.0	52.0	26	43.0	55 5
10	35.5	57.0	27	45.0	53.5
11	48.0	56.5	28	52.0	56.0
12	51.0	**71.0**	29		
13	42.0	47.5	30		
14	35.0	50.0	31		
15	40.0	60.0			
16	53.0	580.	Means	37.2	50.3
17	39.5	44.0	Monthly Mean.	43.7	

Quantity of rain and snow, 7.51 inches.

MORTALITY REPORT.---CITY OF ST. LOUIS.

FROM FEB. 4, 1882, TO MARCH. 4 , 1882, INCLUSIVE.

Small Pox..... 3	Childbirth..... 3	Convulsions & Trismus Neonatorum 42	Syphilis..... 1
Scarlatina. 15	Inanition, Want of Breast Milk, etc. 6	Hydrocephalus and Tub. Meningitis. 6	Apoplexy 4
Pyæmia & Septicæ 4	Alcoholism.. 6	Meningitis & Encephalitis 11	Dis. fem. gen. org. 5
Erysipelas 5	Rheumat'm & Gout	Other Diseases of the Brain and Nervous System22	Surgical Operation 0
Diphtheria 11	Cancer and Malignant Tumor.... 11	Cirrhosis of Liver and Hepatitis...17	Execution..... 0
Membran's Croup. 8	Phthisis & Tuberculosis, Pulmon 91	Enteritis, Gastro-Enteritis, Peritonit, and Gastritis'..... ...19	Deaths by Suicide 6
Whooping Cough. 4	Bronchitis.. 41	Bright's Disease and Nephritis... 8	Deaths by Accid't 22
Ovarian tumor.... 0	Senility 28	Other Diseases of Urin ary Organs. 1	Deaths by Homicid15
Measles 3	Pneumonia..... 76	Diabetes.... 0	Congen Defor'ty 29
Typhoid Fever....10	Heart Diseases ... 32		Total Deaths from all Causes.... 641
Cerebro Spinal Fev 5	Other Diseases of Respir'y Organs 15		Total Zymotic Diseases 106
Remittent, Intermittent, Typho-Malarial, Congestive & Simple	Skin Disease..... 1		Total Constitutional Diseases.....138
Contin'd Fevers,19	Marasmus—Tabes Mesenterica and Scrofula..... 5		Total Local Diseases 298
Puerperal Fevers.. 3	Other Const. Dis. 14		Total Develop'tal Diseases 60
Diarrhœal Disea's 14			Deaths by Viol'ce33
Other Zymotic Diseases 0			

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An experience of more than a quarter of a century convinces us that sugar properly applied is the only correct coating for a pill.

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WHEN PRESCRIBING OR ORDERING.

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Ext Nuc Vom .....¼ gr.

THERAPEUTICS.—As a nerve tonic and stimulant, this form of pill is well adapted for such nervous disorders as are associated with impaired nutrition and spinal debility, increasing the appetite and stimulating digestion.

The practical value of Phosphorus as a therapeutic agent and its applicability to the cure of disease, and especially in those varied disordered conditions consequent upon overwork, which are characteristic of modern civilization. Indeed, it is to this great bane of modern life which exhausts the vital energies of power in renovating nerve-tissue or giving tone to the shattered system.

Phil. Phosphori Comp. may be taken one or two pills three times daily after eating.

Price per 100, $1.50.

PIL: IODOFORM ET FERRI. (WARNER & CO.)

+—Iodoform .....1 gr.
Ferri Redacti.. .....1½gr.

THERAPEUTICS.—A powerful general tonic and alterative, valuable as a remedy in Anæmia, Scrofula, Neuralgia, Chlorosis, Rheumatism, etc.

Iodoform is one of the most important of modern remedies. Since its introduction by us In 1871, it has grown in permanent favor as an indispensable remedy, possessing the properties of a powerful alterative, nervine, sorbefacient, antiperiodic and tonic.

Pil. Iodoform et Feri may be given in doses of from one to two pills as occasion may require.

Price per 100, $2.00.

PIL: DIGESTIVA. (WARNER & CO.)

+—Pepsin Conc't. 1 gr. Gingerine.....1-16 gr.
Pv. Nuc. Vom. ½gr. Sulphur..... ½gr.

THERAPEUTICS.—Useful in relieving various forms of Dyspepsia and Indigestion, and of permanent benefit in cases of enfeebled digestion where the gastric juices are not properly secreted. It is also a gentle laxative and excellent dinner pill, may be taken one after dinner or one before each meal three times daily.

Price per 100, 75 cts.

PIL: CALCIUM SULPHIDE. (WARNER & CO.)

+—1-10, 1-4, 1-2 and 1 gr. each.

THERAPEUTICS.—Extremely useful In the treatment of Acne Scrofula and Cutaneous Diseases.

[*Extract from Dr. Howard Cane's Article in the London Lancet.*]

From the great frequency of occurrence of acne, and from its manifesting itself on the faces of individuals of both sexes, any therapeutic agent which promises success In this often Intractable skin disease will be welcomed by most practitioner. I do not bring the sulphide of calcium forward as a new remedy In the treatment of this disease, for it was recommended some years ago by Dr. Sydney Ringer, but I wish to bring it more prominently into notice as a drug which will often prove of signal service in acne when other means have failed. The success which I attained In my first case which was of a most obstinate nature, led me to try it in others.

Sulphide of Calcium is usually administered in doses of from 1-10 to ¼ four times daily, gradually increasing the dose to one grain six times daily or according to the progress or severity of the case.

Price per 100: 1-10 gr., 50c.; 1-4 gr., 60c.; 1-2 gr., 75c.; 1 gr., $1.00.

WARNER & CO.'S PILLS MAY BE OBTAINED FROM ALL THE LEADING DRUGGISTS OR FORWARDED SAFELY BY MAIL ON RECEIPT OF PRICE.

WM. R. WARNER CO.

PHARMACEUTICAL CHEMISTS.

PHILADELPHIA and NEW YORK.

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The most simple and practical of any stem pessary ever invented; made of India rubber *without lead*, unirritating, of easy application, and unfailingly keeps the womb in its natural position. The first-class physicians in Providence, and eminent practitioners in almost every State, highly recommend it. A pamphlet describing it, and testimonials of distinguished physicians; also Price List sent on application.

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SACCARATED PEPSIN, which has proven its superiority over other Pepsins by its stability, uniformity and agreeable taste. In digestive power it corresponds to the standard adopted by the Committee on the 6th Revision of the U. S. Pharmacopœia which is as follows:

One part dissolved in 500 parts of water, acidulated with 7.5 parts of hydrochloric acid. should digest at least 50 parts of hard-boiled Egg Albumen in 5 to 6 hours at 100° to 104° F.

DRY PEPSIN CONCENTRATED, particularly recommended to manufacturers, possesses 8 times the strength of the above.

PREMIUMS were awarded to the above preparations at the International Exhibition Vienna, in 1873, and the Centennial Exposition in Philadelphia.

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MENSMAN'S PEPTONIZED BEEF TONIC.

The great necessity for a fluid food that would possess *all the elements necessary for the support of the system* having long been felt by the Medical Profession, we call attention to this preparation, containing the *entire nutritious properties* of the muscular fiber, blood, bone and brain of a healthy bullock, dissolved by aid of heat and pepsin, and preserved by spirit; thus constituting a perfect nutritive, reconstructive tonic.

It is not a mere stimulant, like the now fashionable extracts of beef, but contains blood-making, force-generating, and life-sustaining properties, pre-eminently calculated to support the system under the exhausting and wasting process of fevers and other acute diseases, and to rebuild and recruit the tissues and forces, whether lost in the destructive march of such affections, or induced by overwork, general debility, or the more tedious forms of chronic disease. It is friendly and helpful to the most delicate stomach, and where there is a fair remnant to build on, will reconstruct the most shattered and enfeebled constitution. It is entirely free from any drugs. Dispensed in 16 oz. and 12 oz. bottles.

"DR. MENSMAN'S BEEF TONIC

Is a complete representative of lean and fat beef, bone, blood and muscle. It consists of all the properties which combine in the development of the animal body, which are liquefied by an artificial process, simulating natural digestion, and retaining all of their alimentary values. It contains in their perfection all the natural elements of the meat in their natural quantitative relations, without their extraneous or indigestible properties, and therefore requiring the least possible effort on the part of the stomach for its conversion into chyle, and its immediate absorption by the system.

"This tonic is free from any drugs or chemicals, and is a great invigorator or recooperant. I have used this preparation in several cases of sickness of a character which enables me to give the most favorable opinion of its great value, in extreme sickness. Some of the cases referred to are hemorrhage of the bowels, typhoid fever, bilious fever, inflammation of the bowels, where the greatest possible prostration was present, and in which I found this meat tonic to accomplish results I could not obtain with any other preparation. It is a gentle stimulant, and allays the peculiar irritation of the stomach, which destroys the appetite in all forms of disease, when the tone of the stomach is destroyed."

"We published the above article in the November No. of 1877, and will say that we have prescribed the tonic daily to date with the very best results."—Ed. Med. Eclectic.

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Iron, Phosphorus and Calisaya.

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Manufactured on the Sea-Shore from Fresh and Selected Livers.

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This Oil is manufactured by us on the sea-shore, with the greatest care, from fresh, healthy Livers, of the Cod only, without the aid of any chemicals, by the simplest possible process and lowest temperature by which the Oil can be separated from the cells of the Livers. It is nearly devoid of color, odor, and flavor—having a bland fish-like, and to most persons, not unpleasant taste. It is so sweet and pure that it can be retained by the stomach when other kinds fail, and patients soon become fond of it.

The secret of making good Cod Liver Oil lies in the proper application of the proper degree of heat; too much or too little will seriously injure the quality. Great attention to cleanliness is absolutely necessary to produce sweet Cod Liver Oil. The rancid Oil found in the market is the make of manufacturers who are careless about these matters.

Prof. Parker, of New York, says "I have tried almost every other manufacturer's Oil, and give yours the decided preference."

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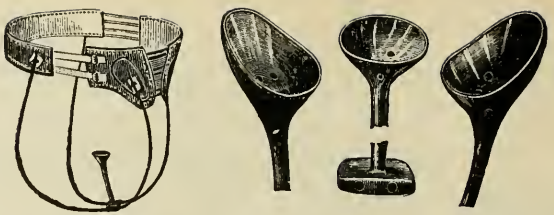

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Natural Uterine Supporter.

No instrument has ever been placed before the medical profession which has given such universal satisfaction. The combination is such that the Physician is able to meet every indication of Uterine Displacements. Falling Womb, Anteversion, Retoversion and Flexions are overcome by this instrument, where others fail, this is proven by the fact that since its production to the Profession it has come into more general use than all other instruments combined.

Among the many reasons which recommend the Supporter to the Physician is itself adjusting qualities. The Physician after applying it need have no fear he will be called in haste to remove or readjust it, as is often the case with rings and various pessaries held in position by pressure against the vaginal wall, as the patient can remove it at will and replace it without assistance.

The Abdominal Supporter is a broad morocco leather belt with elastic straps to buckle around the hips, with concave front so shaped as to hold up the abdomen. The Uterine Support is a cup and stem made of highly polished rubber very light and durable, shaped to fit the neck of the womb, with openings for the secretions to pass out; as shown by the cuts. Cups are made with extended lips to correct flexions and versions of the womb.

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* See note p. 64, Prof. VAN BUREN & KEYES on Urinary Organs.

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RECTAL Suppository CAPSULES 3 Sizes.

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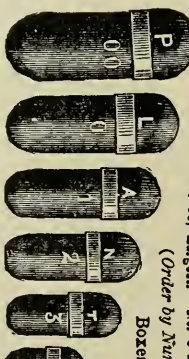

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The FORTIETH REGULAR SESSION will begin on Monday, Sept. 26, 1881, and continue until March 4, 1882. There will be no preliminary lectures. Students should secure their seats at the beginning of the Session. We desire to call the attention of the Profession to the fact that we enforce attendance on three regular courses of lectures so graded as to lead the student from the fundamental to the practical branches in logical order. We are satisfied that the best way to secure an advanced standard of qualification in medical graduates is to lengthen the time of study. This plan of teaching by dividing the total number of students into three classes among other advantages makes clinical instruction more efficient than under the old plan, bringing the student into closer contact with the patients. Practical work in the anatomical rooms and in the chemical laboratory is obligatory. Special lectures on histology, pathological anatomy, ophthalmology and diseases of women have been added to the regular curriculum. The college clinic in the new building on the college grounds provides increased clinical facilities.

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Fees for each winter term, including graduation and all other fees..... $ 90 00

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These Peptones, prepared with great care, contain only Beef digested and rendered assimilable by a pepsin always titrated and regular, extracted from the stomach of the sheep, digesting 7 to 800 times its weight of fibrine, and which cannot be found in commerce. They possess a great alimentary power and give to the digestive organs an intense nutritive action.

They must not be confounded with other Peptones prepared either with rennet of sheep or with pancreas of Pork, and containing a product coming more from the digestion of the stomach mucous, than from the meat.

These Preparations come under 3 forms:

1st. Chapoteau's Pepsical Peptone Powder.

This has only the taste of Meat and offers the advantage of being able to be taken with the first spoon of soup. It is soluble in water, bouillion, or wine. Each teaspoonful represents about 4 grammes of Peptone, or 21 or 22 grammes of Beef, entirely digested and assimilable. Each bottle contains 30 grammes of **PEPTONE**, representing 160 to 165 grammes of Beef, and sufficient for the nourishment of an adult.

2d. Chapoteau's Pepsical Peptone Conserve.

This article is a liquid, neutral-aromatic and keeps well. Each teaspoonful represent, double of its weight of Beef, and is taken either pure or in soup, wine, jellies, or syrups and also in the form of alimentary injections.

3d. Chapoteau's Pepsical Peptone Wine.

Each small wine-glass contains the Pepsical Peptone of 10 grammes of Beef. It has a very agreeable taste and constitutes an excellent aliment, which the patient and children accept with pleasure. It is taken at the beginning of meals, in doses of one or two small wine-glasses.

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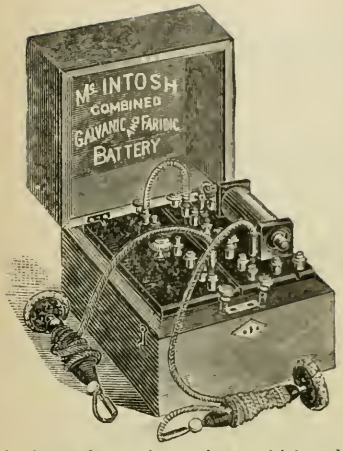

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TO THE

ST. LOUIS MEDICAL SOCIETY

ON

YELLOW FEVER.

Printed on Fine Tinted Paper; Illustrated with Five Colored Plates; Muslin Binding; 8vo.; pp. 328; Price $2.50.

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A Report of the Committee Appointed by the St. Louis Medical Society, to Inquire into the "Relations of the Yellow Fever Epidemic of 1878 to the City of St. Louis,"

AND

A Report by the Chairman of the above Committee, Dr. W. Hutson Ford, of St. Louis, on the "Meteorological Conditions and Etiology of Yellow Fever," and of certain other Diseases associated with a High Temperature, and the Treatment of Yellow Fever.

Revised by the Committee on Publication.

The report of the Committee, consisting of Drs. W. Hutson Ford, Walter Wyman and F. J. Lutz, comprises a general detail of all cases of yellow fever occurring in St. Louis in 1878, with especial reference to the contagiousness of the disease, in five sections, viz.:

Section I.—A detail of all the cases of fever occurring in St. Louis, which were developed in persons coming to that city from the South.

Section II.—Cases of yellow fever treated at the Quarantine Hospital.

Section III.—Cases of yellow fever arising in St. Louis, by contagion from imported cases.

Section IV.—Cases of yellow fever, or of a disease closely simulating that affection, arising in St. Louis or its suburbs.

Part IV, to which the first three parts of this report must be regarded as *introductory*, consists in a systematic treatise on the etiology of yellow fever, based upon the weekly meteorological data of July, August, September and October, for each of the years 1874, 1875, 1876, 1877 and 1878, as procured from Washington, and upon the municipal records of Charleston, South Carolina, for thirty-eight years, being all those years whose records are obtainable between 1832 and 1878.

The subject is treated by a consideration of each of the meteorological conditions in detail, viz., the temperature; the fairness of the days; the rainfall and inundations; the humidity of the air; atmospheric currents, calms and winds; thunderstorms, atmospheric pressure, the ozonicity of the air, and the antagonism of certain diseases to yellow fever.

The guiding principles and theory of the investigation are briefly detailed in a general way in the earlier parts of the section, and each of the sub-sections fully considered in order. All statements and theoretical assumptions are illustrated and established by most extensive comparisons of figures drawn from the sources named, and never before used in the same way.

No work of this kind, as regards yellow fever, has ever been proposed or accomplished, and it must be regarded as a final settlement of the dependence of yellow fever upon combinations of meteorological conditions in the presence of sources of putrefaction. The entire mass of material is over 300 closely printed pages, is absolutely new, and the volume must find its place upon the shelves of every enlightened citizen and devotee of sanitary science. Several colored plates illustrating the matters discussed, are dispersed throughout the first part of the work, and two weather charts, also in color, as already stated, accompanying the report of Dr. Ford. In the Committee's report, the treatment of many of the cases is detailed in full, a feature which cannot fail to be of great importance to the practitioner who has not had an extensive personal experience in yellow fever. The work altogether is purely original, and deals a death blow to the doctrines of the exclusive importation of yellow fever, which have within the last year or two threatened to become so prominent.

Part V contains the theory and practice of the administration of veratrum viride in yellow fever in those cases in which it is applicable in conjunction with other therapeutical measures. The article is based upon a very extensive employment of this drug in fevers generally, and on a large scale in yellow fever. Its administration is endorsed by many of our most distinguished practitioners, and was first suggested and thoroughly applied by Dr. Ford, with the aid of Dr. Octavius A. White, now of New York City.

Section V.—A classification and summary of all cases of yellow fever occurring in St. Louis and its vicinity in 1878.

In collecting the material for their report, the committee has spared no time nor trouble, and a succinct but accurate history is given of every case. The facts collected are of the most interesting character, and must conduce very greatly towards a final settlement of many disputed points in the natural history of yellow fever, and to establish the degree of liability of cities of the middle region of the Mississippi Valley to this disease, at different periods of the warm season.

The data necessary have been obtained by personal interviews with all physicians who treated cases of yellow fever in St. Louis in 1878, with the health authorities, and by close personal inspection of every place described, or where any of the cases occurred, with cross interrogation on the spot of numerous disinterested parties cognizant of the facts. Much other interesting matter is also contained in this report.

The report of the chairman of the committee on the meteorological conditions and etiology of yellow fever, and of certain other diseases associated with a high temperature. This report is divided into five parts, as follows:

Part I consists of an analysis of the conditions of sunstroke, on the basis of a comparison of the meteorological conditions of July and August in St. Louis, in 1878, in the first of which months the memorable epidemic of sunstroke occurred, with those of the same months in ten other cities of the United States, viz., Louisville, Cairo, Memphis, Vicksburg, New Orleans, Galveston, Mobile, Charleston, Norfolk and Philadelphia.

In addition to weekly data furnished for the use of the committee by the Chief Signal Officer at Washington, D. C., the daily variations of temperature, humidity, aspect of the sky, and rainfall in St. Louis, as shown in elaborate charts, furnish the most ample material for a graphic illustration of the dependence of sunstroke upon heat and humidity combined.

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FELLOWS' HYPO-PHOS-PHITES

Contains **THE ESSENTIAL ELEMENTS** to the Animal Organization—
Potash and Lime;

The **OXYDIZING AGENTS**—Iron and Manganese;

The **TONICS**—Quinine and Strychnine;

And the **VITALIZING CONSTITUENT**—Phosphorus,
Combined in the form of a Syrup, with *slight alkaline reaction.*

IT DIFFERS IN EFFECT FROM ALL OTHERS, being pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

IT HAS SUSTAINED A HIGH REPUTATION in America and England for efficiency in the treatment of Pulmonary Tuberculosis, Chronic Bronchitis, and other affections of the respiratory organs, and is employed also in various nervous and debilitating diseases with success.

ITS CURATIVE PROPERTIES are largely attributable to Stimulant, Tonic, and Nutritive qualities, whereby the varions organic functions are recruited.

IN CASES where innervating constitutional treatment is applied, and tonic treatment is desirable, this preparation will be found to act with safety and satisfaction.

IST ACTION IS PROMPT, stimulating the appetite, and the digestion, it promotes assimilation, and enters directly into the circulation with the food products.

THE PRESCRIBED DOSE produces a feeling of buoyancy, removing depression or melancholy, and hence is of great value in the treatment of **mental and nervous affections.**

From its exerting a double tonic effect and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

Each Bottle of Fellow's Hypophosphites contains 128 doses.

Prepared by JAMES I. FELLOWS, Chemist,

48 VESEY STREET, NEW YORK.

Circulars and Samples sent to Physicians on appliction.

☞SPECIAL TO PHYSICIANS.—ONE large bottle containing 15 oz. (which usually sells for $1.50) will be sent upon receipt of **Fifty Cents** with the application, this will be applied to the prepayment of Expressage, and will afford an opportunity for a thorough test in Chronic cases of Debility and Nervousness. Express charges prepaid upon all samples.

FOR SALE BY ALL DRUGGISTS.

A WORD

To those Interested in the

Defense of the Rights of the Public, Science and Medicine.

Since the year 1877 we have lost no opportunity to place before the professions of Medicine and Pharmacy the injury which was resulting to public, professional, and scientific interests, through the abuse of the laws relative to patents and trade-marks, by certain manufacturing pharmacists, or patent medicine dealers, working under the title of "Manufacturing Pharmacists." We have sought and expected a reply to, or counter-attack upon, our efforts, without satisfaction, until recently one Horatio R. Bigelow, M. D., has appeared as the mouthpiece of the patent medicine ring.

A recent and specially enlarged edition of a journal published in Sandyhook, Conn., the *New England Medical Monthly*, contains an article in the interests of the ring, by the above named physician, severely attacking the reputation and policy of our house. We understand that pecuniary aid has been given to this undertaking by those interested. As this article seems to be the concentrated and final effort of our opposers we desire to call the attention of physicians and pharmacists to the fact, and to our expressed willingness to send, *post-paid on application, a printed copy of this article and other printed matter bearing upon the subject*, which we are sure will prove instructive to all who have the interests of the public, the profession of medicine, or science, at heart. The personal attack upon ourselves is beneath our notice. The principle at stake is worthy the attention of every one, and this fact is our only apology for giving the above advice.

Through limited space we will here call attention but to one fact,—that Dr. Bigelow would convey the idea that we were seeking to destroy that just protection given to inventors by the patent law and to manufacturers by the law of trade-marks. We tell Dr. Bigelow, and the whole fraternity of quacks, that this is a willful perversion of our position. The patent law secures to an inventor any new and useful composition of matter; but *he must disclose the secret of his invention, and show that it is new and useful.* The trade-mark law is only to secure to the maker of a known article the benefit of any peculiar skill which he has brought to the making of the article. Hence he may adopt and own *any arbitrary sign to indicate his own manufacture* : this is the whole scope and end of the law of trade marks.

Our war is against the abuse of these laws; against the practices of those spurious pharmacists who seek to draw the protection of these laws *over secret and unknown preparations.* We also denounce that kindred abuse where the *common or only name of an article* is claimed as a trade-mark. To allow this would be to allow the most odious form of monopoly; a monopoly of an article *the composition of which is kept secret and unknown.* Such a monopoly the patent law will not permit. Sound medical science will not permit it. It belongs to the domain of quackery pure and simple.

PARKE, DAVIS & CO.

DETROIT, MICH., March 1, 1882.

Send for "printed matter relative to the abuse of the patent and trade-mark laws."